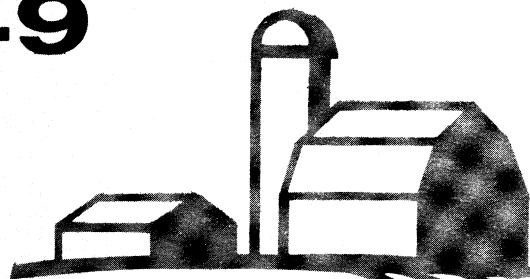


**Agriculture
and
the
Yearbook
of
Agriculture**

1849



1957



Office of Information
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Highlights

1849: The Commissioner of Patents issued Part II. Agriculture - the first "Yearbook of Agriculture."

1862: The Department of Agriculture was established. Its first annual report was Report of the Commissioner of Agriculture for the Year 1862.

1866: Mrs. Lavinia K. Davis discussed "Female Life in the Open Air," and Miss L. C. Dodge gave a disquisition on "Education of Farmers' Daughters."

1868: "Voluminous and desultory essays" were abandoned, and "the approbation and appreciation of intelligent agriculturists" was expected.

1874: Mr. Watts does not concur in the opinion of the Public Printer.

1880: Mr. LeDuc also has troubles. The edition of 300,000 copies is "larger than that of any annual book ever published."

1884: 400,000 copies.

1894: The Annual Report becomes the Yearbook of the Department of Agriculture. "It is believed that the character of the volume can be improved from year to year until it shall become finally a standard book of reference for American farmers."

1921: A series of five Yearbooks devoted to economic problems of farmers was started. The 1925 Yearbook had 1,537 pages.

1936: A new series of Yearbooks, each devoted to a comprehensive survey of a single subject, was started under the editorship of Gove Hambridge.

1942: Appropriations for Yearbooks were suspended during the war years; publication was resumed with the 1943-1947 Yearbook, Science in Farming, with Alfred Stefferud as editor.

Preface

We started this document because people keep asking us questions about the Yearbooks of Agriculture, and we thought we might serve several purposes by bringing the answers together in one place.

Once started, however, we found that the three- or four-page thing we had in mind was taking on the proportions of a book: We ourselves were becoming more and more interested in this grand old institution, which is older than the Department of Agriculture but which, like the corn and grass it sometimes deals with, is new again each year.

We do not claim for it the status of a formal history, because the mists of time have obscured many items that should be in a proper history. What is here is mostly what is plain in the books themselves -- their length, changes in form and purpose, an indication of their content, the number of copies and costs, some quotations from forewords and chapters, and so on.

The full history of a book would have to be more than that. It would have to pay attention to motives and problems -- the struggle to get written words into print despite the onslaughts of gremlins that rejoice in typographical errors; the need always to consider appropriations, budgets, costs, and space; the changes in administrations and the concomitant changes in ways of doing things; the pressures of people who want their own ends served; the ideal that was reached for but not grasped. But those are editors' fardels, which, once a book is out, are forgotten in the preparation of the new one.

One cannot be content with history, of course. Each Yearbook has to be better than any of its predecessors. It has to reflect each year the continuous growth and improvement of agriculture and related sciences; the increase in knowledge about the things that pertain to writing and publishing and, indeed, living; and, naturally, the times in which it is produced.

From its background, a Yearbook derives such mechanical details as name, aspects of format, and routines of preparation. It also derives something more important: The obligation to remain a disinterested, accurate, complete book of science and reference; a book of use to farmers and others who are concerned with some phase of the agricultural sciences; a book prepared with an appreciation of the support the Congress has always given it. It must be a book written and published for people who work in fields, forests, and factories and not for people in ivory towers.

If we had had more time and inclination to do further research for a full-scale history, we could have uncovered details to prove or disprove several claims that others have made for the Yearbook -- that it is the oldest (and only) publication of its kind in the world; that it is the most widely read and circulated publication of its kind; that it is the least expensive to produce; and that it has had an outstanding impact on American farming, research, and rural life.

Some persons write to say they would like to have a complete set of Yearbooks. To them we can offer little help. Nobody in the Department of Agriculture has copies of Yearbooks for general distribution. Many of the books are out of print, and one can buy them only from secondhand bookstores or perhaps at country auctions (although, of course, one can read them in libraries). Some of the later Yearbooks can be bought from the Superintendent of Documents.

The work of compiling the material herein was done by Dorothy R. Rush.

-- Alfred Stefferud, Editor of the Yearbook

The Yearbook of Agriculture can be said to date from 1849, when the Commissioner of Patents, in whose Bureau the Federal work in 1849 agriculture was then centered, issued his annual report in two parts, Part II of which was devoted to agriculture.

The volume, which has no title other than Part II, Agriculture, contained 574 pages and seven engraved plates. It was printed in Washington in early 1850 by Office of Printers to the Senate. It had eight main sections: Agricultural Statistics; General View of American Agriculture; Agricultural Meteorology; Report on the Breadstuffs of the United States, by Prof. Lewis C. Beck; Reports and Letters Relating to Crops, &c.; Miscellaneous Communications; Analytical Tables; and Statistical Tables.

Its table of contents had 122 entries, among them: A General View of American Agriculture, by D. Lee, M. D.; Wheat Crop of the United States, by Hon. C. P. Holcomb; Culture of Indian Corn, by D. Lee; Sheep, Wool, and Depots, by T. C. Peters, Esq.; Culture of Root Crops, by W. P. Fogg, Esq., Transplanting Grape Vines, by Robert Neale, Esq.; Application of Lime, by E. Kohler, Esq.; Cotton and Cotton Culture, by D. Lee; Culture of Cuba Tobacco; Time for Felling Timber, by William Painter, Esq.; Cultivation of Peppermint, by D. C. Van Slyck; Report on Fruit, by Heman Wendell, M. D.; Farming among the Sioux Indians, by P. Prescott, Esq.; Culture of Broom Corn, by Sanford Howard, Esq.; and Hogs Packed in the West, by L. Cadwell, Esq.

Most of the material came from farmers and others to whom Thomas Ewbank, Commissioner of Patents, had sent circulars requesting information.

Mr. Ewbank in his letter of transmittal to Millard Fillmore, Vice President of the United States, wrote in part:

"With the view of adding to the general interest and to the popular value of this portion of the annual exposé, the Secretary of the Interior directed that the task of collating and arranging the materials for it should be committed to a practical and scientific agriculturist. This has accordingly been done, and in the following pages will be found the result."

Daniel Lee, the "practical and scientific agriculturist," wrote in the foreword:

"Since 1823, when Judge Buel introduced the first bill to establish an Agricultural College in the State of New York by legislative aid, constant efforts have been made to render the study of rural economy as a science, not less than its practice as an art, popular in this country. Twenty seven years have now elapsed - a whole generation has passed off the stage - and New York, with her five hundred thousand cultivators of the soil, is still without the first agricultural school worthy of the name; nor is any other State in a better condition. Dark as this view of agricultural education really is, it is the darkness that precedes the dawn of a bright and happy day. Men who have labored for the improvement of Agriculture, and the elevation of Agriculturists, for a quarter of a century, with little of hope and less of pecuniary reward, now realize the beginning of an auspicious change in public sentiment. Thanks to agricultural journals and societies, the people will soon discover that labor and capital, devoted to tillage and husbandry, are as worthy of legislative consideration as labor and capital employed in mining, commerce, and manufactures. So soon as this truth shall be fairly comprehended, the long struggle of the friends of improvement will be crowned with success, and the victory won over both ignorance and its traditions.

"It is indeed wonderful how long those enlightened, reasoning farmers, who, like Washington, cherish a due respect for their high calling, have had to beg and beg in vain of State Legislatures, and of Congress, for a little assistance to prevent the universal impoverishment of American soils. Whatever has been done to arrest the exhaustion of arated lands has been effected not only without due aid from Government, but in spite of a mistaken policy, which encourages the removal of all the elements of bread and meat from cultivated fields, and their speedy transportation beyond the possibility of restitution. Neither the earnest recommendation of the illustrious farmer of Mt. Vernon, nor the prayers of two generations of agriculturists, nor the painful fact that nearly all tilled lands were becoming less and less productive, could induce any Legislature to foster the study of agriculture as a science. Happily, this term, when used in connection with rural affairs, is no longer the subject of ridicule. Some pains have been taken, in this Report, to prove that one thousand millions of dollars, judiciously expended, will hardly restore the one hundred million acres of partially exhausted lands in the Union to that richness of mould, and strength of fertility for permanent cropping, which they possessed in their primitive state.

"The continued fruitfulness of the earth is an interest far greater and more enduring than any form of government.

"If the twenty-two millions of people now in the United States may rightfully consume the natural fertility of one-third of the arable lands of the country, the forty-four millions who will be here twenty-five years hence may properly extinguish the productiveness of the remaining two-thirds of all American territory.

"A great principle is involved in the science of agriculture, which reaches through indefinite generations, and forms the basis of all

possible improvements, and of the highest hopes of our race. All advancement is impracticable in a country that closely approximates the condition of a desert. As a nation of farmers, is it not time that we inquire by what means, and on what terms, the fruitfulness of the earth, and the health and vigor of its invaluable products, may be forever maintained, if not forever improved?

"These are questions of universal concernment, to the careful and rigid investigation of which no man should refuse to lend a listening ear. A government policy which results in impoverishing the natural fertility of land, no matter by what popular name it is called, must have an end. It is only a question of time when this truly spendthrift course, this abuse of the goodness of Providence, shall meet its inevitable punishment. To show the necessity of reform, a plain estimate has been made, in the chapter on "Agricultural Statistics," to prove that we annually waste enough of the elements of bread, without which not the first kernel of corn can be formed, to produce one thousand million bushels of this important staple.

"The Board of Agriculture of the State of Ohio estimates the crop of corn in 1849, within the limits of that State, at seventy million bushels; and it will hardly be extravagant to say that the farmers of Ohio, Indiana, Michigan, Illinois, and Wisconsin export a million tons of breadstuffs and provisions where they import one ton of the atoms drawn from their virgin soils, to form agricultural products. Can it be said, in truth, that a million tons of bread and meat are produced from nothing? Will it be contended that the earth within the reach of good ploughing contains an unlimited amount of the precise things consumed to make the plants, whose organic and inorganic elements are taken from the soil and never restored? If this be true, then all fertilizers are not only unnecessary, but absolutely worthless. This cannot be so, for lands that, seventy years ago, produced from twenty-five to thirty-five bushels of wheat in the State of New York, now yield only from six to nine bushels per acre; and in all the old planting States, the results of exhaustion are still more extensive and still more disastrous.

A lack of mental culture and discipline is the most serious impediment to the diffusion of agricultural science among the mass of farmers. Its language is to them an unknown tongue. Hence the most sublime truths in the economy of nature are shut out from the popular understanding. It is feared that this will ever be the case until schools, designed to teach those branches of learning which the practical farmer greatly needs, but does not possess, are established and maintained throughout the United States. So long as we refuse to plant the seed, it is folly to expect a rich harvest of knowledge....

"As a class, farmers have few advantages for being well informed in the rapid progress now making in the economical improvement of soils, cultivated plants, and domestic animals. This lack of opportunity is a serious misfortune, and leads to this practical result: With five million farm laborers -- two million seven hundred thousand

in the slave-holding, and two million three hundred thousand in the free States -- American agriculturists so misdirect this immense power of production, that the injury done to one hundred million acres of land is nearly equal to all the apparent net profits on the whole rural industry of the country.

"To illustrate an important fact as well as principle, let us suppose a farmer produces crops worth one thousand dollars, and they cost him, including all expenses for labor, wear of implements, interest on capital, &c., eight hundred and fifty dollars. Nominally, he has a profit of one hundred and fifty dollars. But it often happens that, if he should undertake to replace in his cultivated fields as much of potash, soda, magnesia, phosphorus, soluble silica and other elements of crops, as both tillage and cropping had removed, it would cost him one hundred and seventy-five or two hundred dollars to effect that purpose. It is only by consuming the natural fertility of the land that he has realized any profit.

"In a national point of view, all labor that impoverishes the soil is worse than thrown away. No fact in the science of political economy is more important than this. To reduce a field, which in its virgin state produced forty bushels of corn per acre, down to twenty, in ten years, and then cultivate it forty years and harvest only twenty bushels per acre, in place of forty, is equal to a loss of four hundred bushels of corn per acre, or one-half the diminished product, without any equivalent whatever. Thus to impoverish land is to wither the muscles of both man and beast employed in its tillage....

"Such insects as Hessian and wheat flies, curculios, weevils, army and boll worms, annually destroy crops to the amount of twenty millions of dollars. If a pirate on the high seas, or an Indian savage on land, injures the property of a citizen, to the amount of a few dollars, millions are expended, if need be, to punish the offender....But when public enemies of a different name do a thousand times more injury to a whole country, are its citizens under any necessary restraint which forbids their making a common effort to protect their property from insect devastators? Parasitic plants, such as rust on wheat and many fungi, as well as injurious insects, are on the increase. To attempt to explain the reasons why this is so, would lead at once into questions in animal and vegetable physiology, out of place in this brief synopsis of such rural topics as are believed to be of general interest.

"Government can do much to check the ravages of insects by collecting and diffusing useful information as to their habits, times of transformation, and the best means of destroying or avoiding them. If farmers fold their arms and say that nothing can be done, by the science of entomology, or by any other means, what but an increase of the evil is to be expected? Not to try to escape the infliction is treating one's enemies with unmanly forbearance, and evinces a belief in fatalism worthy of a disciple of Mohammed.

"Something should be done in reference to the analysis of soils, fertilizers, marls, and other minerals constantly sent to the Patent Office for that purpose. For many years, chemists and philosophers have been investigating the affinities and other peculiarities of "molecules" or ultimate indivisible particles of matter. These scientific researches have revealed many important truths and natural laws, which have a direct bearing on all the economical purposes of agriculture. Some pains should be taken to impart a knowledge of these laws to all practical farmers....

"Professor Henry, the distinguished Secretary of the Smithsonian Institution, has authorized me to say that the extensive chemical apparatus and excellent laboratory of the Institution will be at the service of any reputable chemist, to make investigations for the increase and diffusion of knowledge in this branch of science.

"The science of preserving meat, lard, butter, cheese, and other animal as well as vegetable substances, used as food for man, has received very little attention in this country. This neglect causes a loss of many millions every year. To say nothing of the bad taste of eating so much frowy and rancid butter at home, full one-half of all that is sent to England and other foreign countries is sold at half the price of sweet butter, by reason of the defective manner in which it is manufactured and put up for market. American farmers have great advantages for the economical production of beef and pork, mutton and wool, and it will render them a valuable service to obtain from Europe correct information of all discoveries and improvements, either in the growing and feeding of domestic animals, or in the curing of provisions.

"Few are aware how susceptible of improvement is the living machinery which elaborates milk for nearly every family in the Union. There is a reliable account, in this Report, of a dairy of forty-one cows, kept in the State of New York, which yields sixty-two dollars in butter, cheese, and milk, as the product of each cow a year. From the returns of the last State census, it is safe to say that one million one hundred thousand cows are now milked in that State, which are supposed to yield about twenty dollars per head. To improve these up to an average annual product of thirty-one dollars each (that is, to one-half what the best large dairies in the country now yield) would add twelve million one hundred thousand dollars to the income of the citizens of a single State. This gain, by the improvement of one kind of rural machinery, would be equivalent to creating a capital of two hundred million of dollars, and placing the money where it would yield over six per cent. interest in perpetuity.

"If all the sheep in the United States gave as good returns in wool for the food consumed, as the best one hundred thousand now do, it would add at lease sixty million pounds to the annual clip of this important staple.

"In one of his letters to Sir John Sinclair, General Washington says, in substance, that, at the time he entered the public service in the War of the Revolution, his flock (about one thousand) clipped five pounds of wool per fleece. Seven years after, when he returned to his estate, his flock had so degenerated that it gave an average of only two and a half pounds per head, which was the common yield of Virginia sheep then as it is now.

"Although the numerous importations of superior sheep, cattle, horses, and swine have greatly benefited the country, it must be admitted that much has been lost by suffering improved animals to deteriorate. Every wool grower should ponder well this fact. If two and a half pounds of wool will pay the whole cost of keeping a sheep a year, five pounds will pay one hundred per cent profit on that cost. Washington was eminently a "book-farmer," and was anxious to gain knowledge from the educated agriculturists of Europe and of his own country. His overseer believed in keeping sheep as his father did, and was opposed to all innovations in husbandry.

"There are now not far from six million horses and mules in the United States: and it is not too much to say that in a few generations these animals may be improved full \$30 a head on an average. If so, then the gain by this increase of muscular power, and its greater durability, will be one hundred and eighty million dollars. If we study critically the machinery for converting grass, roots, and grain into beef and pork, the difference is found to be still more striking. Let the facts relating to this subject be spread before the people, and great improvements will soon follow; and all classes will share equally in the profits of more productive labor.

"It is a law of nature, now fully recognized by men of science, that all cultivated plants and fruits, as well as all animals, are subject to constitutional deterioration, and are susceptible of organic improvement. Hence one thousand seeds of one variety of wheat, corn, cotton, or tobacco will produce a larger return, under equal advantages of climate, soil, and culture, than a like number of seeds of another variety.

"Plants propagated by buds, like sugar-cane, potatoes, and fruit-trees, are peculiarly liable to constitutional weakness, and are less able than seedlings to endure rude treatment in violation of the laws of vegetable life. On many plantations the vital force of the sugar-cane is nearly exhausted: and this office is strongly urged to procure from countries where the plant is indigenous and grows from the seed, a new stock both of seeds and ratoons for the use of planters....

"Both seeds and cuttings of the best figs and olives grown on the coast of the Mediterranean should be procured through American consuls resident at the different cities on the borders of that sea. Figs and grapes, "oil and wine," will some day be numbered among the staples of the Southern States.

"There is reason to believe that the most improved varieties of wheat grown in England and France would be a valuable acquisition to this country; and our wheat-growers would esteem it an especial favor if only a few bushels were procured for general distribution. With the small sum appropriated for the purpose, about eighty thousand packages of seeds have been put up and distributed, within the last three months. With a better organization and greater facilities for collecting seeds and cuttings, vastly more good might be done. There are now some two hundred thousand copies of agricultural papers and periodicals printed, which circulate more or less in every State in the Union. These are doing an invaluable service to the country. They cannot, however, enact laws for collecting annually reliable statistics of the results of labor and capital employed in Agriculture. Truthful statistics form the groundwork of all reforms -- of all progress....If "knowledge is power," ignorance is weakness; and the removal of this weakness is one of the highest duties of every republican government....

"There has been enough of the elements of bread and meat, wool and cotton, drawn from the surface of the earth, sent to London, and buried in the ground or washed into the Thames, to feed and clothe the entire population of the world for a century, under a wise system of agriculture and horticulture. Down to this day, great cities have ever been the worse desolaters of the earth. It is for this that they have been so frequently buried many feet beneath the rubbish of their idols of brick, stone, and mortar, to be exhumed in after ages by some antiquarian Layard. Their inhabitants violated the laws of nature which govern the health of man, and secure the enduring productiveness of the soil. How few comprehend the fact that it is only the elements of bread and meat evolved during the decomposition of some vegetable of animal substance that poison the air taken into human lungs, and the water that enters the human system in daily food and drink! These generate pestilence and bring millions prematurely to their graves!

"Why should the precious atoms of potash which organized the starch in all the flour, meal, and potatoes consumed in the cities of the United States in the year 1850, be lost forever to the world? Can a man create a new atom of potash, or of phosphorus, when the supply fails in the soil, as fail it must under our present system of farm economy? Many a broad desert in Eastern Asia once gladdened the husbandman with golden harvests. While America is the only country on the globe where every human being has enough to eat, and millions are coming here for bread, how long shall we continue to impoverish ninety-nine acres in a hundred of all that we cultivate?

"Both pestilence and famine are the offspring of ignorance. Rural science is not a mere plaything for the amusement of grown up children. It is a new revelation of the wisdom and goodness of Providence --a humanizing power, which is destined to elevate man an immeasurable distance above his present condition. To achieve this result, the light of science must not be confined to colleges; it must enter and illuminate the dwelling of every farmer and mechanic. The knowledge of the few, no matter how profound or how brilliant, can never

compensate for the loss incurred by neglecting to develop the intellects of the many. No government should be wanting in sympathy with the people, whether the object be the prevention of disease, the improvement of land, or the education of the masses. One per cent. of the money now annually lost by reason of popular ignorance will suffice to remove that ignorance."

Some of the replies to Mr. Ewbank's circular to farmers and others are quoted in part:

J. W. Colburn, of Springfield, Vt.: "Sheep Husbandry ... is diminishing in consequence of the low prices of wool under our present tariff, which fosters a foreign competition in all woolen fabrics, and in the production of wool. This once great source of wealth to Vermont, I fear, is destined to be annihilated, and we are again to become dependent upon foreign workshops for our clothing, one of the essential necessities of life."

William Bacon, of Richmond, Mass.: "The potato crop has been the best for many years --there has been but very little of the scourging rot, and potatoes are of good size and fine quality. We hope the evil of past years has passed away to afflict us no more. We have seen the yield per acre reach in some cases four hundred and six hundred bushels....The price has varied from twenty-five to forty-four cents per bushel."

Giles B. Avery, of New Lebanon, N. Y.: "This crop ~~barley~~ is extensively cultivated here, as it gives a better return for labor on land of moderate strength than any other small grain, and is the very best for seeding with grass, as it comes off so early in the season, usually about the middle of July. It is much used in our State for the manufacture of ale. But our society not consuming this, or other fermented or spirituous liquors, it is exclusively used as provender....In our system of rotation, barley always follows a hoed crop, as it seems to do best on a subdued soil, and it will even make a better return on the poorest of land succeeding a crop of oats, than on a green sward reversed. Of course, the yield varies with seasons and soils: with us for fifty years past it has ranged from thirty to eighty bushels per acre, and has averaged forty-five during that period."

Charles Lee, of Penn Yan Yates Co., N. Y.: "Farmers are beginning to trim up and graft their old orchards; others are setting anew the earliest and best varieties; and on each returning spring and fall is brought to his door the nurseryman's wagon, laden with the choicest and best varieties of fruit trees, shrubs, and plants; so that no man, who, in this day of progress, is the happy possessor of a rod square of his mother earth, can offer a good and sufficient reason why he or his children should be deprived the privilege or the pleasure, at some future day, of 'sitting beneath his own vines and fig-trees,' and eating in peace fruits purchased by his own labors and good sense."

John N. Rottiers, of Orleans, Jefferson Co., New York: "This county raises much fine young stock. Average price at three years old, fifteen dollars; cost of keeping, at least five dollars per year; this is not remunerating; and the consequence is that more heifers are now raised than steers. Heifers at two and three years old begin to pay for their keeping, and when they prove inferior cows, are turned off in the fall at ten or twelve dollars, according to size and age, and driven to Albany, Boston, or New York markets." Mr. Rottiers wrote of labor: "The usual price of hired hands on farms is from ten to fifteen dollars per month, with board, which is worth one dollar twenty-five per week. In haying, we pay from seventy-five cents to one dollar per day; and in harvest for cradling, one dollar or one and a half per day, with board."

W. S. Morton, of Farmville, Cumberland County, Va.: "Our forefathers, finding themselves at too great a distance from market to cultivate any other as a sale crop than tobacco, established its production as their chief reliance, and it has been entailed by the strong bonds of national custom on their posterity, who have been hewers of wood and drawers of water to this modern Pharaoh, down to the present day. It is pleasing to find that there are a few bold-spirited pioneers, who have discovered that they cannot afford to cultivate tobacco, and have successfully resorted to other objects as money crops. A few of us are humbly following their example, but with cautious and trembling steps, along the dark, difficult and untrodden route, uncertain whether by forsaking the beaten road, on which Poverty seems to have hung out a broad sign from her gloomy hostelry, we may not meet a speedier precipitation into ruin....Another of our difficulties arises from our destitution of lime....Costly as lime is rendered by the expense of transportation, some few have dealt considerably in that article recently, with strong hopes of bountiful remuneration....Another obstacle to our agricultural improvement has been that from the days of Patrick Henry and John Randolph, we have been warm politicians. This has greatly interfered with our success as cultivators of the earth. But it is cheering to reflect that although warm partisans we are liberal ones. Being almost equally divided, we contend vigorously, but the warmest friends are frequently found in opposite ranks, and we think each other fools in nothing but politics."

Richard G. Morriss, of Morristown, Amherst County, Va.: "Plaster is freely used by many of our farmers with happy effects, particularly on clover; indeed, to borrow an expression from one of our oldest and most successful planters (Major Yancey), 'clover and plaster, like man and wife, ought never to be divorced.'"

William C. Dickson, of Milledgeville, Baldwin Co., Ga.: "But one factory in our county; that one goes by steam-power; it is an extensive establishment, and is doing a good business. Capitalists have found out that money invested in factories pays a better percentage than loaned out at interest. There ought to be one in every county in the State. The South should manufacture cotton-bagging

to pack their cotton in. One bale of cotton would make bagging for about thirty bales, which would require 65,000 bales of cotton to make the bagging and several thousand to make the rope. This would give employment to 40 or 50 factories, and hundreds of poor people would be employed to operate them, and thus the means would be furnished them of earning an honest livelihood. When will the South begin to think of these things?....Flouring mills should be built; this would cause a great increase in the cultivation of wheat, which is at this time neglected....If cotton could again become a profitable crop, and farmers could be induced to raise a little, improve their lands and keep up their fertility, we might yet prosper and get paid for our labor; otherwise we will keep our land poor, be poor ourselves, and leave our children poor; or, we must pull up stakes and move to where the soil is inexhaustible. It is the successive crops of cotton which have been grown on our lands that have so exhausted them."

David L. White, of Quincy, Gadsden Co., Fla.: "I have for 30 years steeped my seed-corn in nitre brine, a pound of nitre and eight ounces of copperas to the bushel of seed-corn, the grain to remain in steep from 48 to 60 hours before planting. My rule in selecting seed-corn is to ride myself into the field accompanied by two hands with bags, seeing that they select only from stalks bearing two good ears, and of these the largest is gathered. My seed-corn is then put away in a new crib erected on high wood posts four feet above the ground, leaving one and a half inches between the weather-boarding and cover. This crib is located about 100 yards from my corn-house. When housing my corn, I lop a china-tree and throw a quantity of berries, leaves and all, into the house with each load of corn. After the experience of a number of years, I find this to be a good preventive of weevil; and since I adopted the plan, my house has never been infested with rats."

Thomas Affleck, of Washington, Miss.: "Land is cheap. Good cows can be had at moderate prices, from \$15 to \$40, yielding from two to twenty quarts per day, according to the selection of animals, and the manner they are fed....Horses and mules are now bred in considerable numbers in some parts of the country, and many of them splendid animals. The business is found to be profitable, and does not in the least interfere with the cultivation of either sugar or cotton....No portion of the Union is blessed with a soil or climate more favorable to the production of fine fruit than this and most other parts of these Southern States....The greatest impediment to success has been the want of acclimated or naturalized trees to begin with....Lime is an absolutely indispensable ingredient in the soil in which fruit trees of any kind are grown, and especially the apple and pear."

J. N. Brown, of the Parish of Iberville, La., near Manchac: "The average product of the State, I would say, was about 1,000 lbs. and forty gallons of molasses to the acre....I estimate the cost of making sugar in this State at 4 cents per lb....Next to sugar our most important crop is Indian corn. For the old stubble land the

Spanish or creole corn is most esteemed. The average crop in stubble land is about 20 bushels to the acre, in new land, or that not exhausted by corn, the average is forty....The next crop in importance to corn, to the sugar planter, is the cow-pea, both as a restorative to exhausted caneland, and as provender to the numerous teams necessary to the cultivation of a sugar estate....I have no doubt this rotation of one planting of cane, and the two succeeding years of rattoons, with the litter from the cane ploughed in as described, and alternated every fourth year with the corn and peas, will forever maintain the alluvial lands of the Mississippi fully equal to the successful production of sugar."

Isaac Hubbard, of Claremont, N. H.: "I came to the farm on which I now reside, more than seventy-two years ago. The country was then new, and wheat was usually the first crop. I cultivated for more than twenty years one variety --white kernel and straw, bearded -- which seldom yielded less than 20, and often 25 and 30 bushels to the acre. At that time, from 1790 to 1810, more wheat was raised here than was wanted for home consumption, and the surplus was exported. Now we depend upon the West for flour. Very little wheat is sown by our farmers, and what little is sown usually goes to the weevil."

Pryor Lea, of Goliad, Tex.: "We have at present but few good sheep in the country; they being principally of the Mexican breeds, which are very inferior. The cost of keeping is little more than herding, not over 25 cents per head. I think south-western Texas the best adapted to raising sheep and woolgrowing of any part of the United States."

C. S. Chase, of Racine, Wis.: "Dent corn is much esteemed for its great productiveness. The length of the season here usually allows this variety abundant time to ripen. The husks and stalks are very little used for fodder. Corn should be ground and fed raw to cattle, and cooked for hogs. Had we a mill for grinding corn on our farms, we should use the meal altogether. A machine called a corn-grinder has recently been invented by Mr. Whitney, of this place. I have seen it in operation, and think it will prove of great value to farmers all through this country."

E. A. Holt, of Montgomery, Ala.: "Corn is our great support for man and beast....A man and horse on our rich prairie lands can make 500 bushels of corn per annum. Its cultivation has been increasing for several years past, but from the high price of cotton it is likely to decrease next year."

Origen Perkins, of Racine County, Wis.: "Many flocks have been brought here of fine Saxony and other breeds. They are healthy and thrive well, and sheep would be very profitable stock but for the ravages annually made among them by dogs. Until very recently, most of our fine wool was sent East; but now our farmers find a home market, as several woolen factories have been put in operation in different parts of the State."

A Fahnestock, of Lancaster, Ohio: "The subject of fruit culture is one of the greatest importance....In setting out orchards, select trees two years old from the graft -- dig a good sized hole 2 spades deep, set the tree, and incorporate with the earth around it some well-rotted manure; cultivate the soil, but not with high crops. The trees will be benefited by applying every spring Blandy's wash; consisting of 3 gallons strong lye, 1 pint whale-oil soap, 1/4 lb. salt-petre, and a handful common salt. No crops are more profitable to the farmer than orchards of early and late fruits. Peaches are worth in Columbus \$2 to \$3 per bushel; and in Cincinnati, as I am informed, they are never sold less than \$3 to \$5 per bushel. A peach orchard of some hundred acres at a fair distance from Cincinnati, with the view of supplying that city, would be a capital investment."

R. Y. Rogers of Vicksburg, Miss.: "I intended to send you a full account of our success in raising Cuba tobacco in this State, but absence from home, until too late for your Report, prevented me. There is a considerable quantity raised here, but it is in small lots of half to one acre, and all made into Regalia cigars, and sold in this State. They sell from \$15 to \$30 per M., the price depending principally on the care and attention given in the curing, &c. I have realized the latter price for mine the last two years. I pay five dollars per M. for making, and board the hand. A good hand will make from 200 to 250 per day, and boxes holding 100 cost 5 cents each. 100 lbs. tobacco will make about 4 thousand cigars. An acre will produce about 600 lbs. of this tobacco; it generally nets me, in this way, about one dollar per pound."

James Anderson, of Louisville, Ky.: "The method adopted by farmers is to allow the hemp to remain immersed in water until the glutinous matter is completely dissolved; the consequence is a considerable impairing of the strength of the fibre: for a complete solution of the gummy matter could not take place without fermentation, and fermentation is the beginning of decay....To produce an article of hemp suited to the consumption of the Navy Department, it is only necessary to immerse the hemp for a period of twenty-four hours, then withdraw the water, and let the hemp remain in bulk until the generation of natural heat takes place; that will be observed in the course of ten or twenty hours after a thorough impregnation by the heat; then inundate a second time, and let it remain until you are prepared for its convenient removal....With the aid of the improved milling machine, I am sure that a good hand could clean 500 pounds per day on the hand-brake, hemp prepared as above. Hemp so prepared is remarkable for its weight and oily appearance, and just the article that would make the superintendent of the United States rope-walk exclaim, 'America can beat the world!'"

A section of this volume, "Analytical Tables," contains information on organic analysis of five varieties of ripe maize or Indian corn, analysis of buckwheat, analysis of fruit trees, analysis of clover, and analysis of prairie soil.

The section of statistical tables contains data on tobacco trade, hogs packed in the West, imports of breadstuffs into Great Britain, summary statement of the value of domestic exports during the year, United States exports to foreign ports, cotton trade, Oregon lumber trade, commerce of various ports, and statistics of different States and cities.

The report for 1850 contained 579 pages. It was printed in Washington in 1851 by Office of Printers to the House of Representatives.

1850 It had seven main sections: Review of Principal Crops, Study of Soils, Fruit Culture, Sheep Husbandry, Communications, Meteorological Tables, and Statistical Information.

A section on "The Study of Soil," written by Daniel Lee, contained chapters on the origin of soils, sand in soils, clay in soils, critical study of the elements of fertility, philosophy of improving soils, and chemical effects of tillage.

In his introductory statement, he wrote: "If four-fifths of the persons employed in agriculture in the United States work 250 days in a year, their aggregate labor exceeds one thousand millions of days in twelve months. The compensation realized for this immense amount of industry depends in a large degree on the fruitfulness of the soil under cultivation. Hence the study of the sources of fertility, and of the causes of barrenness in improved land, has a direct bearing on the every-day employment of more than two-thirds of the labor and capital of the republic. It is almost impossible to over-estimate the importance of understanding all the elements and circumstances which affect the natural productiveness of the earth."

The report for the year 1851 had 676 pages and nine engraved plates.

In his letter of transmittal to the Hon. Linn Boyd, Speaker 1851 of the House of Representatives, Thomas Ewbank wrote: "In view of the rapid destruction and threatened extermination of the principal indigenous ruminants of the continent, a paper has been prepared, at my request, by Professor S. F. Baird, of the Smithsonian Institution, to show their susceptibility of domestication, and that duty requires use, instead of wantonly destroying, to preserve and multiply these noble denizens of our forest and plains, both because of the great interest attached to them by the naturalist, and of the value of some of them as laborers, and all of them as furnishing materials for manufactures and for food."

The introduction to the section of the report on Agriculture and Agricultural Education had the statement: "In submitting this portion of the annual Report, it is gratifying to note that the interest in agriculture, and the improvements in this most vital of the arts, keep pace with the progress of the age in other respects. In our widely-extended country, embracing a range of climate and diversity of soil which enable us to produce almost every article of consumption, it seems to be peculiarly the province of the government to contribute

all the aid in its power for the advancement of agriculture by the collection and diffusion of useful information on the subject."

The section on Cultivation of Special Crops included such titles as Cultivation of Basket Willow in the United States, North Carolina Grapes, Camelina Sativa, a New Oil Plant, Cultivating Forests, On the Tallow Tree, and Culture and Preparation of Sumach.

The section on Cattle Breeding contained the following titles: On the Philosophy of Fattening Cattle, Reducing the Food of Cattle Before Giving It, Sheep, On Sheep-breeding, Wool-growing, and History of the Ohio Company for Importing English Cattle.

P. A. Browne wrote "There are, doubtless some persons who imagine that they have no interest in the breeding of sheep and raising of wool; if there are any such among our readers, we have a few preliminary remarks to make to them. Every one who eats mutton or wears cloth coats and pantaloons, or flannel or worsted under-clothing, or who in winter sleeps under a blanket, is directly interested in our subject."

Prof. S. F. Baird^r wrote this about American ruminants: "It is not too much to suppose that the time may come when much of this continent, now desolate, and supporting a scanty and half-starved population, may become a populous region, filled with towns and villages, and owing much of its prosperity to the employment of some of our own native animals in a state of domestication." He discussed also the characteristics of deer, antelope, sheep, goat, bison, and musk ox and their economical employment as beasts of burden, to furnish food, or to yield valuable materials for the useful arts.

In reply to the circular sent out by the Patent Office in 1851, Charles Goodrich, of Industry, Franklin County, Maine, wrote of his method of breaking steers to use for ploughing or to go with a cart.

G. W. Guptill, of Cornishville, Maine, wrote: "Clover is universally raised after wheat for fodder and as a fertilizer; its long roots bring up materials to the surface that would not be available with other crops. There is no truer saying than the common one, that 'clover sweetens the land.' Herdsgrass and red-top are generally sown with clover."

Nehemiah Smith, of South Freedom, Maine, wrote: "Ploughing is the principal way of farming, and people are beginning to wake up to the best methods to procure muck, (a manure found in low places) made of vegetable matter. It is attracting much attention, and will eventually be the strong arm of farming."

George Campbell, of West Westminister, Vt., wrote: "It gives me much pleasure to add my testimony in favor of the great good that is resulting to the farming interest by the circulation of the Annual Agricultural Report of the Patent Office. Every farmer in the country has reason to rejoice that government has so far interested itself in the advancement of agricultural science; and farmers, true to human nature, having received favors, will be prone to ask for a continuance of the same."

Isaac Parker, of Potsdam, N. Y., gave his remedies for killing insects: "The best remedies against the weevil or Hessian fly, or any other insect or disease of any kind, is --first, use only the pure and perfect seed in clean and suitable soil, in good season; and, to insure against smut, wash it in water; then let it stand from six to twelve hours in a brine of common salt, dissolved to the point of saturation; after which, mix from two to four quarts of fresh slacked lime with each bushel of wheat; and thus let it remain for a few hours."

Edwin G. Booth, of Nottaway County, Va., wrote: "It has been said that he who makes two blades of grass to grow where but one grew before confers more benefit on mankind than the whole race of politicians put together...." About tobacco, he said: "...I believe that he who could cause one plant to grow where two now grow, would confer almost as much service as he who could double the blades of grass. I mean, by this, that the vast amount of labor employed in its cultivation can be more profitably employed on other operations, and that a country is more benefited by the productive articles essential to the sustenance of animal life than those tributary to its destruction.

J. F. Hammond wrote from Fort Fillmore, N. Mex.: "The following vegetables are dried here; and, when cooked a year after, are as fresh as when they were picked: Tomato, picked ripe, split open, and dried in the sun; English pea, picked green, placed on dirt floors, dried in the shade. Snap bean, picked green, steeped in warm water, placed on plants in the sun to dry. Squash, picked green, cut in slices, dried on plants in the sun."

Thomas Ewbank, Commissioner of Patents, wrote an article, "Agricultural Bureau." He said: "The institution of an agricultural bureau by the general government has been a subject of public discussion for years, and is now (as it has repeatedly been) under the consideration of Congress.... Presidents Taylor and Fillmore have followed the example of Washington, in calling the attention of Congress to the subject.

"While some object to a bureau for the promotion of agriculture on constitutional grounds, and contend that every great industrial interest of the country has equal claims upon Congress, others are averse to its establishment from a belief, or fear, that it would become more or less subservient to political and party purposes.

There is, however, an institution already organized by Congress, to which no such objections can apply: it is national in its character, purposes, and location; it possesses the requisite means and appliances
....

"The propriety of establishing in the Smithsonian Institution a department of Agriculture, and one also of Mechanical science, with suitable appropriations, to aid in working out the great practical problems of the day, is respectfully suggested for the consideration of Congress.

"By thus identifying itself with the active agents of modern progress, by taking up new and important problems in agricultural and mechanical science, and giving right directions for their solution, its benefits would be felt throughout the length and breadth of the land."

The report for 1852 contained 248 pages. It was printed in Washington in 1853 by Robert Armstrong, Printer. It had nine main sections:
1852 Agriculture and Agricultural Education; American Pomology; Miscellaneous Notes and Information; Agricultural Circular and Replies; The Potato - Its Natural History - Deterioration, and Improvement; Southern Agricultural Exhaustion and Its Remedy; Prize Essay; Commercial, and other Statistics; and The Cotton Trade.

Silas H. Hodges became Commissioner of Patents in 1852. In transmitting his annual report to the Hon. Linn Boyd, Speaker of the House of Representatives, he wrote in part: "It would have been gratifying to have given a new character to the work, and to have made it such as would better satisfy the wants and the tastes of the best informed among those for whom it is especially intended. Soon after entering upon the duties of this Office, I made strenuous efforts to have this effected; but directly found that no competent person would undertake such a task at so late a period. It has, in fact, cost more than usual efforts to have it completed in the present form, even at this late stage of the session."

The following is from a report, "Progress of Agriculture in the United States," by Daniel Lee: "Agriculture gives employment to more capital and labor in the United States than all other pursuits combined; and its progress marks, in a peculiar manner, the advancement of the republic in wealth, civilization, and power."

Concerning the depletion of soil fertility, Dr. Lee wrote: "The soil loses thousands of tons of its most precious constituents of crops every year, and receives no equivalent in manure, potash, soda, and magnesia, or in ammonia and phosphoric acid. Without adequate restitution the impoverishment of arated fields is inevitable."

Dr. Lee went on to say: "If four-fifths of the elements of fertility contained in the residue of the food consumed by the twenty-five millions of people in the United States were restored to the land, the gain to the latter beyond what it now receives would be equal to one hundred million dollars a year."

In another article, "American Agricultural Literature," Dr. Lee wrote that more agricultural journals were published in the United States than in all the world. Several States had agricultural societies and some published annual volumes, but the wants of reading farmers in most of the States were indifferently supplied. "Wise and valuable professors of the principles of tillage, farm economy, agricultural engineering and physiology, have yet to be educated in this republic.... Shall the owners and cultivators of American soil wait twenty-five, fifty, or one hundred years longer, before the first American agricultural school or college is founded on this continent? This is really the only literary agricultural question before the public at this time; and until it is decided either for or against a systemic effort to increase our professional knowledge, advancement in rural sciences, except by accident, is impracticable."

Papers read at the second session of the American Pomological Society, held in Philadelphia in 1852, are published in this volume. These include reports of State fruit committees.

Titles of some of the papers are: Cotton-Caterpillar, Rust, and Rot; Rotation of Crops and Practical Suggestions; Practical Value of the Analysis of Soils; and The Agricultural Value of Phosphate of Lime.

In reply to the circular sent out by the Commissioner of Patents, Mary B. Throckmorton, of Washington, D.C., wrote: "If I succeed in inducing even one of my fair countrywomen to turn her attention to the cultivation of flowers, I shall not think I have written in vain.... We, as a nation should adopt a national flower, and not be behind England, Ireland, Scotland, or France, in sentiment. And surely from our world of flowers one could be found suitable."

James H. Forman, Oak Bowery, Ala., submitted a paper on hill-side ditching, a method of surface drainage.

Chas. Yancey, Buckingham County, Va., in closing his report to the Commissioner, said: "Your Report is the most valuable document circulated by Congress. It is sought after by the people, and read with pleasure and instruction."

Isaac Dingley, Marshfield, Plymouth County, Mass., in writing of the death of Daniel Webster, a resident of Marshfield, said: "While the State has hesitated at the cost of a model farm, he has furnished one from his own pocket, where we may go and see and judge for ourselves, without money and without price, in what we may follow him and in what we may not. He has undoubtedly raised the credit of farming among us, and solved to a certainty that interesting problem, which more provisions can be raised within the town, when they cannot be procured to better advantage elsewhere."

Silvanus Bourne, Wareham, Mass., deplored the growing of wheat in that State: "When the legislature of Massachusetts offered a bounty on wheat, many of her farmers appropriated their best land and manure to the

raising of this article. In most cases they failed to get more than half a crop; which soon convinced the farmers (not the legislature) that it was better for a Massachusetts farmer to raise something else, and let New York and Ohio raise wheat, as heretofore. Had the time and money lost on the experiment been put into railroads, connecting this State with the wheat-growing States, the result would have been more beneficial to all parties concerned."

Samuel Beach, Brunford, New Haven County, Conn., had this to say about the value of the Patent Office Reports: "I was thinking, if these Reports ... could be more generally distributed amongst our agriculturists, or be placed within the means of farmers, they would be eagerly sought for, and prove a blessing to the nation....After Congress have published their quantum, if many thousand copies extra were printed, to be sold at cost of publishing, I think that many of a class who seldom now, if ever, get hold of one, would soon have them after an opportunity."

Gershom Wiborn, Victor, Ontario County, N. Y., wrote that the Commissioner could not have suggested a more important inquiry than that of forest culture. "Our forest lands are failing rapidly.... In our rich grain-growing county we have reserved but a small supply of forest land, and we have been in the habit, for the last thirty years, of using it for pasturage. By this means almost every young shoot has been annually destroyed.... Our plan of forest culture may not entirely rob the present generation of fire-wood; but it will be sure to send our posterity to the Lackawanna or to the Rocky Mountains for fuel."

F. J. Cope, Hemphill, Westmoreland Co., Pa., wrote: "The philosophical apparatus and the tedious manipulations recommended by some purely theoretical writers for sugar-curing hams, are their humbug. There is no more necessity for sugar-curing a ham, than there is for sugar-ing the words to tell the 'modus operandi,' to adapt either to the taste of a man of sense. If it must be sweetened to adapt it to an over-fastidious palate, why not sugar it in the process of cooking?" Mr. Cope recommended curing with salt. After smoking and drying, he immersed each ham in a strong decoction of black walnut hulls, then packed them in boxes with dry sawdust.

H. N. Gillet, of Quaker Bottom, Lawrence County, Ohio, wrote of rotation of crops: "Among old-school or anti-book farmers: corn, corn, corn, forty years in succession, and then move to the Far West. Among the progressives: clover, two years; potatoes, corn, wheat, clover."

From Connersville, Fayette County, Iowa, John Spivey wrote: "Hogs have been, and still are found to be, the most productive source of wealth to our farmers. The fattening of hogs by turning them from the clover fields into the standing corn in September and October, is a source of improvement of the lands."

John C. Reid, Independence, Mo., added a postscript to his reply, in which he said, "The cutting of hemp is exceedingly hard work; he who contrives or invents a machine to facilitate the cutting of hemp, will inevitably make a fortune; to cut half an acre in a day is a hard day's work."

Frederick Munch wrote from Warren County, Mo., "I was raised in a hilly country of the Old World, but I never saw there hill-side fields, though they had been perhaps for a thousand years in cultivation, so badly washed as they are here done in one single year. Some of our hill places are already ruined beyond redemption - and this is a new country."

Thomas E. Massie wrote from Santa Fe, N. Mex.: "Indian corn is one of the chief agricultural products of New Mexico, but without irrigation there is no certainty of success in its cultivation.... The colors are numerous - blue, yellow, white, red, and even jet black. Blue seems to be the predominant color, and is esteemed by the natives as the richest of all, being almost universally used by them in making the tortilla, or their corn cake.... Speaking in an agricultural sense, land in this country is nothing, and water is everything."

The report for the year 1853 contained 448 pages and 4 colored plates. It was printed in Washington by A. O. P. Nicholson. It had 1853 eight main sections, entitled Domestic Animals; Fertilizers; Improvement of Land; Bread Crops; Textile and Forage Crops; Miscellaneous Crops; Fruits, Wine, Etc.; and Climatology. The volume also contained a 14-page index.

The following is from the preface: "Among the foreign products which have been more recently introduced and distributed, and which appear to be adapted for profitable cultivation, we would instance the Cuba tobacco seed...; the alfalfa from Chili; peas from Japan; frijoles, or turtle-soup beans, from Mexico; butter beans from Russia; duorra corn from St. Martin; cotton seed from Navigator's Island and Cape Haytien; winter rape from France; and quinoa from Peru."

This year the replies to the Commissioner's inquiries were printed not in a separate section as in previous volumes, but were grouped by subjects through the book.

D. J. Browne wrote about domestic animals -- a history of the importation of horned cattle; horses, asses, and mules; sheep; and swine. James B. Davis, Columbia, S.C., wrote of his introduction of the Asiatic buffalo, the Brahmin ox, and Cashmere, Scinde, and Malta goats into South Carolina.

Mr. Browne wrote: "Upon Washington's first retirement, in 1783, he became convinced of the defective nature of the working animals employed in the agriculture of the Southern States, and set about remedying the evil by the introduction of mules instead of horses.... Up to this period, scarcely any mules were to be found in the Union."

As soon as Washington's views on this subject were known abroad, he received a present, from the King of Spain, of a jack and two jennies, selected from the royal stud at Madrid. At the same time, the Marquis de Lafayette sent out a jack and jennies from the island of Malta. Washington availed himself of the best qualities of the two jacks by crossing the breeds. The General bred some very superior mules from his coach mares, sending them from Philadelphia for the purpose. In a few years, the estate of Mount Vernon became stocked with mules of a superior order, rising to the height of sixteen hands, and of great power and usefulness - one wagon team of four mules selling, at the sale of the General's effects, for \$800."

Dr. Charles T. Jackson, of Boston, Mass., wrote on the "Etherization of Animals." He described the use of sulphuric ether, alone or mixed with chloroform, in operations.

At the last session of Congress in 1863, a bill was discussed regarding the importation of camels for the purpose of communicating with Oregon and California. It was thought that the demands for camels would be increased rather than diminished by the construction of a railroad to the Pacific.

Other articles in this section were: "The Striped Gopher, or Prairie Ground Squirrel, of Wisconsin," by P. R. Hoy, M. D., of Racine, Wis.; "Importation of Sky-larks," by John Gorgas, of Wilmington, Del.; and "On the Importation and Protection of Useful Birds," by H. L. Wolford, of Wooster, Ohio.

George P. Fisher, of Dover, Del., wrote in reply to the Commissioner's circular on the use of fertilizers: "Our most approved plan of manuring is to cover as much of the cornfield, in the spring, as we can, with barn-yard manure; and then to sow guano, at the rate of 300 pounds to the acre, on the residue of the field, turning it under deep with the plough. If the corn-field is a clover sward it should be turned in the fall and well limed, and the manuring done in the spring as above, except that the spring ploughing should not be more than four inches deep."

F. C. Clopper, of Montgomery County, Md., said, "The article of guano has become indispensably necessary to the production of remunerating crops of wheat and corn on our worn out fields."

The section on bread crops contains articles on Indian corn, wheat, rye, barley, oats, buckwheat, rice, and potatoes.

The section on textile and forage crops contains articles on cotton; investigation of the fibre of the cotton plant; remarks on the cottons of India; flax and hemp; cultivation of the osier; grass, hay, and other fodder; beans and peas; Mexican frijoles; the Oregon pea; the Japan pea; and the culture of colza and rape for oil.

M. W. Philips, of Edwards's Depot, Miss., wrote: "... This one thing is a fixed fact - that, next to bread, cotton is of more importance to our country, aye to the world, than any one thing; and the general government could with propriety appropriate, say \$10,000 for the express purpose of testing what is best for cotton culture."

The amount of cane and maple-sugar made in the United States in 1853-54 was estimated at 545,000,000 pounds, which, at 6 cents, was worth \$32,700,000.

The section on climatology contains an article entitled "Agricultural Climatology of the United States Compared with That of Other Parts of the Globe," written by Lorin Blodget for the Smithsonian Institution.

The report for 1854 contained 520 pages and eight engraved plates.

There were 12 main sections - domestic animals; insects; 1854: fertilizers; bread crops; textile and forage crops; miscellaneous crops; fruits, nuts, and wine; gardening; live fences; miscellaneous subjects; climatology; and commercial statistics.

The Commissioner of Patents, Charles Mason, wrote in the "Preliminary Remarks": "A considerable share of the money appropriated by Congress for Agricultural purposes has been devoted to the procurement and distribution of seeds, roots, and cuttings. It was believed that in this manner the greatest benefit could be realized, and the intention of Congress most fully complied with.

"A prime object has been the introduction and naturalization of new and useful vegetable products, hitherto unknown in the United States. Measures have been taken to procure from every quarter of the globe such seeds, plants, roots, and cuttings as would admit of useful and successful cultivation in this country."

Townend Glover was author of a 30-page article, "Insects Injurious and Beneficial to Vegetation."

D. J. Browne was author of the following articles: Remarks on the Principles of Breeding; Guano - Its History, Sources, Qualities, and Application; Light and Shade - Their Influence on Vegetation; Rotation of Crops; Wheat Diseases; Potatoes - Production of New Varieties from Seed; The Chinese Yam; Turnips - Their History and Culture; and Researches on the Sorgho Sucre. Mr. Browne also wrote the section on Gardening, which he said he got his information from agricultural publishers and seed-growers. This section gives directions for the cultivation of the kitchen garden as well as the landscape garden.

Other articles in this volume are: "Remarks on Fertilizers, or Saline Manures," by Charles T. Jackson; "On the Fertilizers for Fruit Trees," by Marshall P. Wilder; "Rice," by R. F. W. Alston; "Indian Millet, or Dourah Corn," by N. T. Sorsby; "Preservation of Potatoes for Seed," by J. N. Chandler; Couch or Phin Grass," by

C. E. Potter; "Cultivation of Cuba Tobacco," by Joseph M. Hernandez; "The Production from Seed of New Varieties of Fruits, Adapted to Particular Localities and to General Cultivation," by Marshall P. Wilder; "Fruit-Culture at the South," by J. Van Buren; "Remarks on the Grape Disease of Europe," by J. F. Allen; "Cultivation of the Osage Orange for Hedges," by James McGrew; and "Proposed Rule for Measuring Bushels," by J. H. Forman.

The report for 1855 contained 488 pages and 11 engraved plates.

Charles Mason, Commission of Patents, in submitting his report 1855 to the House of Representatives, quoted a letter that he sent to all State and Territorial Governors asking for cooperation in obtaining agricultural statistics. He asked that it be the legal duty of the assessors to obtain these statistics at the time they are making their annual assessments of personal or real property.

D. J. Browne wrote most of the main articles in each section. One chapter was, "On the Purification of Cities and Towns; The Decolorization of Their Fecal Matter; and Its Removal and Conversion into Manure."

Other articles were: "Chemical Analyses of Corn-Cobs," by Charles T. Jackson; "Sweet Potatoes - Cultivation and Management," by Henry J. Deaver; "The Proper Time for Cutting Timothy" by Jared P. Kirtland; and "On the Manufacture of Champagne Wine," by D. Ponce.

The appropriation of August 18, 1856, for the collection of agricultural statistics, investigations for promoting agriculture 1856 and rural economy, and the procurement and distribution of cuttings and seeds amounted to \$75,000. The Commissioner, Charles Mason, gave a statement of the expenditures when he submitted his report for 1856 to the Congress. Members of the House of Representatives received 200,000 copies of the report for 1856.

The section on animals contained 160 pages. Birds, rats, mice, groundhogs, prairie dogs, and squirrels were described, and their habits were discussed.

The reports for 1857 and 1858 were submitted by J. Holt, Commissioner of Patents. Ten thousand extra copies of the 1858 report were 1857-58 printed for distribution by the Department of the Interior.

In submitting the report for 1859, Commission of Patents, Wm. D. Bishop, 1859 wrote: "Owing to the reduced appropriation made by Congress for agricultural purposes, for the fiscal year ending June 30, 1860, the office has been compelled to reduce its expenses and confine its action to a more limited sphere than heretofore. In doing this, it was found necessary either to decline purchasing for distribution the usual varieties of garden and field seeds, or to abandon the experiment of propagating the tea, and various other foreign plants and grape-cuttings, for which orders had been given. The expense which had already been incurred in their procurement

would hardly justify the office in throwing them aside. It was accordingly deemed advisable to apply the remainder of the funds solely to the procuring of information and preparing the material for the Agricultural Report, and to the propagation and distribution of such varieties of foreign seeds and cutting as had been already engaged."

The report contained an article on veterinary medicine, by Dr. B. F. Craig, of Washington, D. C. Another was "Some Hints Upon Farm Houses," by Samuel D. Backus, Architect, New York. It was illustrated with pictures of houses and drawings of floor plans.

The report for 1860 had a 20-page report "Patents for Agricultural Inventions or Discoveries for the Year 1860." The name of 1860 the invention, the inventor, his residence, and the date of the patent were given. The inventions included bee-hives, butter-workers, ties for cotton bales, cultivators, churns, cotton cleaners, hay elevators, flower-pots, harvesters, a device for preventing hogs from rooting, potato-diggers, various kinds of ploughs, rakes, apparatus for clarifying and evaporating saccharine-juices, apparatus for protecting trees from insects, and yoke fastenings for oxen.

When D. P. Holloway, Commission of Patents in 1861, submitted his report to Congress, most of his 20-page letter of transmittal 1861 was a plea for a separate Department of Agriculture.

D. J. Browne was appointed to visit Europe to investigate the cultivation and manufacture of flax. His 118-page report, "The History, Industry, and Commerce of Flax," was published in this volume.

At the request of the Secretary of the Interior, Zadock Pratt wrote an article, "The Dairy Farming Region of Greene and Orange Counties, New York, with Some Account of the Farm of the Writer." There were drawings of his farm buildings, the milk room, churn room, and packing room.

An act was approved on May 15, 1862, that established the Department of Agriculture. Section 3 of this act said in part: "And be 1862 it further enacted, That it shall be the duty of the Commissioner of Agriculture to acquire and preserve in his department all information concerning agriculture which he can obtain by means of books and correspondence, and by practical and scientific experiments, (accurate records of which experiments shall be kept in his office,) by the collection of statistics, and by any other appropriate means within his power; to collect, as he may be able, new and valuable seeds and plants; to test, by cultivation, the value of such of them as may require such tests; to propagate such as may be worthy of propagation, and to distribute them among agriculturists. He shall annually make a general report in writing of his acts to the President and to Congress, in which he may recommend the publication of papers forming parts of or accompanying

his report, which report shall also contain an account of all moneys received and expended by him. He shall also make special reports on particular subjects whenever required to do so by the President or either house of Congress, or when he shall think the subject in his charge requires it...."

Isaac Newton was appointed Commissioner. His first annual report, transmitted to the President on January 1, 1863, was called 1862 Report of the Commissioner of Agriculture for the Year 1862.

In his letter of transmittal, he wrote of the progress already made in agriculture and the conditions of a still grander progress and prosperity. The essential conditions he said were: "Peace; a continued and increasing demand for agricultural products, both at home and abroad; an increased respect for labor; a more thorough knowledge and practice of agriculture as an art and science; and, finally, a more thorough education of our farmers in the physical sciences, in political economy, in taste, and general reading."

An account of the International Exhibition of 1862, held in London, was given by Prof. J. W. Hoyt, Commissioner for Wisconsin.

Other titles in this volume included: "Some Outline of the Agriculture of Maine," by Samuel L. Boardman; "The Wheat Plant," by Lewis Bollman; "Imphee and Sorghum Culture, and Sugar and Sirup Making," by J. H. Smith; "Wild Flowers," by Thomas Gardner; "Descriptions of Leading Popular Varieties of the Apple and Pear," by F. R. Elliott; "Climatology of American Grape Vines," by James S. Lippincott; "Remarks on the Physiology of Breeding," by S. L. Goodale; "Sheep Husbandry in the West," by Samuel P. Boardman; "The Kerry Breed of Cattle," by Sanford Howard; "Additional Observations on the Ailanthus Silk-worm of China," by John G. Morris; "The Manufacture of Maple Sugar," by C. T. Alvord; "Farm Implements and Machinery," by J. J. Thomas; "Coal Oil," by J. P. Lesley; "Marbles of Rutland County, Vermont," by S. M. Dorr; "Health of Farmers' Families," by Dr. W. W. Hall; and "The Preservation of Food," by Prof. L. C. Loomis.

Dr. Hall wrote: "The impression pervades all classes of society that the cultivation of the soil is the most healthful mode of life, and gives the highest promise of a peaceful, quiet, and happy old age." He disproves this fact, however, in his article on the health of farmers. He listed the chief and direct causes of nine-tenths of the diseases of families of farmers: Eating, catching cold, and dress. He gave advice to farmers on these three things. The second part of his article was on the hardships of farmers' wives. "Few things will bring a more certain and happy reward to a farmer than for him to remember his wife is a social being; that she is not a machine, and therefore needs rest, and recreation, and change. No farmer will lose in the long run, either in money, health, or domestic comfort, enjoyment and downright happiness, by allotting an occasional afternoon, from mid-day until bedtime, to visiting purposes. Let him,

with the utmost cheerfulness and heartiness, leave his work, dress himself up, and take his wife to some pleasant neighbor's, friend's, or kinsman's house, for the express purpose of relaxation from the cares and toils of home, and for the interchange of friendly feelings and sentiments ...; all of which, in turn, tend to cultivate the mind, to nourish the affections, and to promote that breadth of view in relation to men and things which elevates, and expands, and ennobles, and without which the whole nature becomes so narrow, so contracted, so barren and uninteresting, that both man and woman become but a shadow of what they ought to be."

The statistical section included tables on population of loyal States and population of disloyal States; tables on the agricultural productions of the loyal States and the disloyal States; and tables on exports.

This second annual report of the Department of Agriculture was submitted to the President by Commissioner Isaac Newton.

It was resolved in the Senate of the United States, June 27, 1864, "That fifteen thousand copies of the Report on Agriculture be printed for the use of the Senate and seven thousand for the use of the Department of Agriculture."

Daniel Needham, of Vermont, one of the American representatives at the agricultural exhibition at Hamburg, Germany, wrote an article about the exhibition and the 26 premiums awarded to the United States. The American prize sheep called Vermont Merinos took three prizes.

The article on apples and pears that appeared in the 1862 report was received so favorably that Mr. Elliott continued the article in this volume. Additional varieties of apples and pears and grapes were described.

The Civil War caused much thinking about the lack of cavalry horses.

Francis Morris, of New York, wrote an article on the subject, in which he said, "As events succeeded each other, and a few battles took place, it became painfully evident that mounted soldiery were necessary, and in formidable numbers.... It was then that the loyal men of the north were deeply mortified at the discovery that they possessed neither horses nor riders worthy of sustaining the glory of a legitimate cavalry service." In the South, it was different. "Every planter of means plumed himself upon his stables, and no southern town of any magnitude was without its race-course.... Almost every southerner learns to ride while a mere child, and is perfectly at home in the saddle long before he arrives at manhood."

Several articles treated homes and family life.

Mrs. L. B. Adams, of Detroit, Mich., was author of an article entitled Farmers' Boys. She wrote that "No fact is more evident among farming communities than that the boys almost universally grow up with a distaste for farm pursuits. No sooner are they of age than they turn to seek for more varied if not less laborious duties in town and city life.... Boys on the farm, as well as in college, have a future before them, and should be educated in reference to the place in that future which their natural abilities entitle them to fill. Parents who do not act upon this principle, but simply drive their boys like horses or oxen to the plough, will find their farm improvements paid for at a dear rate, and need not wonder at finding themselves deserted and left to a lonely old age." Mrs. Adams advised fathers on how to treat their sons. Boys should be treated as partners, not underlings, working for their board, she maintained. Advice was given also to mothers and sisters: "Mothers and sisters are too much occupied in household affairs, and, the latter especially, in little toilet artifices for their own adornment, to think or care much about the tastes or wishes of those overgrown, uncouth-looking boys, who never seem fit to be seen anywhere but in the kitchen and back yard.... Mothers and sisters hold the destinies of men in their hands, and through them the destinies of future wives, mothers, and sisters also."

Dr. W. W. Hall, of New York discussed how to choose a site for the house, water conveniences, privies and water-closets, piazzas, house-walls, ice-houses, and barns and stables.

The Hon. Simon Brown, of Concord, Mass., had an article on farmers' gardens.

Ruth Hall, of Chicago, wrote about house plants: "The cultivation of house plants has a refining and quieting influence on families where they are grown; they adorn the house as nothing else can, and give to the cheapest furniture an air of elegance which no other ornament can impart."

The progress report of William Saunders, superintendent of the experimental garden of the Department of Agriculture, and the report on entomology by the Department's entomologist, Townend Glover, were printed. The entomology report was an account of the remedies already proposed and practiced for the destruction of the coleopterous insects, or beetles.

When Isaac Newton transmitted his 1864 report to the President, he wrote: "Notwithstanding the devastation caused by the terrible war in 1864 which we are engaged, the diminution of the laboring force of the country by repeated calls for able-bodied men, the great and continued demand for money and means to suppress the rebellion, and the constant claims and interruptions to which portions of our country have been subjected, our agriculture during the past year has been prosperous and progressing."

Some of the chapters in this volume were: "Virginia: Her Past, Present, and Future," by Samuel M. Janney; "Culture and Management of Forest Trees," by Jno. J. Thomas; Sorghum, or Northern Sugar-Cane, by Wm. Clough; "Cotton, (By Free Labor.)," by M. D. Landon; "The Hop Plant," by Lewis Bollman; ""Improvement of Native Grapes by Seedlings and Hybridization," by S. J. Parker; "Popular Varieties of Hardy Fruits," by F. R. Elliott; "Roadsters and Trotters," by Thomas S. Lang; "Importance of Raising and Feeding More Cattle and Sheep," by Charles V. Taylor; "The Pennsylvania Barn, " by Hon. Frederic Watts; "Green Manuring and Manures," by John F. Wolfinger; "Connexion of Natural Phenomena of the Seasons with Agriculture," by John L. Russell; "The 'Game Birds' of the United States," by D. G. Elliott; "Oology of Some of the Land Birds of New England," by E. A. Samuels; "Birds and Bird Laws," by J. R. Dodge; "Fresh and Salt-Water Aquaria," by Robert A. West; and "Textile Fibres of the Pacific States," by Wilson Flint.

Mr. Janney wrote in his article on Virginia: "It is my purpose to give a concise account of the natural resources of Virginia, and of the extent to which they have been improved, showing the condition of the State before she subjected herself to the desolating scourge of civil war, and pointing out what she may become when peace shall be restored, with the advantages of free labor, enlightened enterprise, and general education.... The most populous and productive part of Loudon county lies between the Blue Ridge and the Catoctin mountain, extending from the Potomac about twenty miles south. It was settled originally by Pennsylvanians, many of whom were Friends, or Quakers. The farms are generally small, compared with those in other parts of the State, and the cultivation, being chiefly by free labor, has caused it to become the garden spot of Virginia."

The Department initiated a system of correspondence with our consuls abroad, designed to elicit information concerning the character and condition of foreign agriculture. J. R. Dodge compiled a report from the consular correspondence and published it in this volume.

The report of Henri Erni, the Department's chemist, had to do with fermentation.

The section on statistics included tables on condition of crops in 1864 compared with 1863; wool production of California; wool production of the Atlantic loyal States; and California wines.

Isaac Newton in his letter of transmittal to President Andrew Johnson for the report of 1865 wrote: "The increasing demand made upon the 1865 department for the agricultural report, which is yearly becoming more extended and urgent as the appreciation of its value and usefulness is widened and intensified, induces me to ask Congress for an additional number of copies. The limited number allowed for circulation by the department forbids a very liberal distribution among those engaged in agricultural pursuits, who especially desire and seek the information it contains; many of whom are dependent upon the department for their supply. A single copy

to each of its correspondents would alone absorb nearly the entire annual allotment to the department. There should also be retained a sufficient number of each volume for the future supply of foreign exchanges, libraries, and agricultural and kindred associations."

This volume included reports of the superintendent of garden, William Saunders; the superintendent of the experimental farm, George Reid; the entomologist, Townend Glover; the chemist, Henry Erni; and the statistician, J. R. Dodge.

During this year, Townend Glover was sent to Paris to represent the Department of Agriculture at the exposition of insects useful or injurious to crops. He received the first premium for his work on the insects of America. His report on the exposition is in this volume.

Other chapter titles are: "American Forests, Their Destruction and Preservation," by Rev. Frederick Starr, Jr.; "Alsike Clover," translated from Handbook of Swedish Agriculture, by J. Arrhenius; "American Dairying, Its Rise, Progress, and National Importance," by X. A. Willard; "Bee-keeping," by Mrs. Ellen S. Tupper; "Model Piggery," by Paschall Morris; "System of Farm Accounts," by John H. Bourne; "Weeds of American Agriculture," by William Darlington; "Observations on Atmospheric Humidity," by James S. Lippincott; and "Meteorology of 1865," by A. B. Brosh.

Mrs. Tupper wrote in her article on the business of bee-keeping: "Health is to be derived from it. The ancients called the honey bee 'Deborah, or she that speaketh.' Would that its gentle hum might now speak to many women in our land, and awaken an interest in a pursuit so interesting, and, at the same time, so profitable. The quick observation and gentle handling, so requisite in the business, belong peculiarly to women, and there is no part of it which is laborious, or that may not be appropriately performed by them.

"It has proved to me of great benefit. I came west twelve years ago, under sentence of speedy death from one of New England's best physicians, yet now rejoice in perfect health restored. More than to all other causes I attribute the change to the interesting occupation which has kept me so much of the time in the open air, and paid me for being there. I most heartily recommend it to others, who are seeking either health or a pleasant and profitable employment."

The report for 1866 contained the reports of the chemist, entomologist, and others.

1866

There were 39 articles in addition to the reports. Some of the titles: "The Origin of the Domestic Turkey," by Spencer F. Baird; "Why and Where Button Sheep are Profitable," by J. R. Dodge; "Training Animals for Work," by W. H. Gardner; "The Hog and Its Products," by Charles Cist; "Pisciculture, with Reference to American Waters," by Theodore Gill; "Female Life in the Open Air," by Mrs. Lavinia K.

Davis; "Education of Farmers' Daughters," by Miss L. C. Dodge; "Ship Timber in the United States," by William W. Bates; and "Country Roads," by Henry F. French.

Mrs. Davis wrote: "It is doubtful if the world presents finer specimens of rounded, graceful, beautiful girlhood, from seventeen to twenty-two, than are to be found in most of our towns and villages; but from thence onward the universal verdict favors the English maiden." She attributed this premature decay to the lack of fresh air and exercise. "Many a mother has very little idea how gratifying it is to the children of the household to have her interested in matters outside of the kitchen and the mending-basket. A twilight walk, a stroll in the woods, a picnic, a berrying excursion, with mother for the presiding genius of the occasion, makes such a day one to be marked with a white stone, and remembered forever afterwards...."

Miss Dodge wrote: "Female education should not be partial or one-sided, but should include equally its mental, moral, physical, and domestic aspects.... I desire to urge seriously upon mothers the importance of keeping their daughters under their own roof-tree instead of sending them prematurely to boarding-schools before habits of study and thought are formed, and moral principles firmly fixed; otherwise the probability is strong that they will return totally changed in tastes and feelings, with false views of life, disgust for old associations, and, perhaps, old associates, and superficial attainments...."

John W. Stokes became Acting Commissioner upon the death of Isaac Newton in June 1867. Later in the year, Horace Capron was appointed 1867 Commissioner. Some of the chapters in his report were: "Culture of the Orange and Citron," by Laura C. Redden; "Rice Culture," by Augustus L. Taveau; "Experiments in Liquid Manuring," by William S. Rand; "Irrigation," by Charles D. Poston; "Value of Birds on Farms," by Edward A. Samuels; "Farmers' Clubs," by Rufus Nutting; "Steam Cultivation," by D. S. Curtiss; and "Cotton under High Culture," by George W. Gift.

An index of this volume and a general index of Agricultural Reports from 1847 to 1866 were included.

J. R. Dodge, editor, in submitting his 1868 report to the Commissioner, 1868 said: "The abandonment of the long-continued usage of admitting voluminous and desultory essays into the annual report of the Department, which was contemplated and in part accomplished in the volume for 1867, is made complete in the present issue.

"While the domain of book-making and newspaper enterprise was invaded, the matter itself was not always of the kind contemplated by the organic act requiring reports upon agricultural progress and investigation. The essay was the work of a single mind, covering a limited field of observation, and prepared with the aid of private resources only. It was not a statement of results of Department labor and investigation. It was not legitimately an official report.

"It is believed that the present system will command the approbation and appreciation of intelligent agriculturists. The annual report of the Department of Agriculture will consist of the reports of the Commissioner and of division officers and special agents of the Department, including, under the report of the editor of the annual, digests of the researches of the office, upon special and timely topics, demanded by the exigencies of the hour, and illustrative of the direction of rural effort and of the progress of the time. Such investigations may be made with the aid of a large corps of regular and special correspondents of the State and local societies representing agriculture and horticulture, and of the diplomatic representatives of this country, . . . as well as of experts in any line of research desired, who may be employed to compile and enlarge the matter in possession of the Department."

Some of the papers in the editor's report were on: Practical entomology for farmers' sons; country roads and road laws; recent farm experiments; the public domain; our industrial colleges; recent agricultural books; and agricultural and horticultural periodicals.

The volume contained 19 engraved plates.

The 1869 book consisted of the reports of the Commissioner, Horace Capron; the statistician, J. R. Dodge; the entomologist, 1869 Townend Glover; the chemist, Thomas Antisell; the superintendent of gardens and grounds, William Saunders; the botanist, C. C. Parry; the agricultural meteorologist, André Poey; and the editor, J. R. Dodge.

Some of the papers in the editor's report were: Landscape gardening; the cranberry interest; the onion; tea culture in the United States; tests of department seeds; recent farm experiments; agricultural patents of the year; a few facts in sheep husbandry; laws relating to fences and livestock; progress of industrial education; agricultural capabilities of the territories; and donations to the agricultural museum.

Of 225,000 copies printed of the 1870 report, 150,000 were for the use of the House of Representatives, 50,000 for the use of 1870 the Senate, and 25,000 for distribution by the Commissioner 1871- of Agriculture. 1874

Frederick Watts became the Commissioner of Agriculture in 1871. The reports for this and following years continued in the same manner. Each volume contained the report of the Commissioner, the statistician, the chemist, and other divisions of the Department, as well as reports on development of industrial education, new researches in the Department, and reports that showed the trend of rural activity and progress.

Frederick Watts in 1874 wrote in his report: "There is no incident which so cripples the operations of this Department as the want of the punctual publication of its Annual Reports. For the last two years, the report has not been published. And while the Congress, at its last session, apparently made the effort to order the publication of the Annual Reports of 1872 and 1873 for the use of Congress, in the opinion of the Public Printer it failed to attain its object. While I do not concur in this opinion, it is due to him to say that to print them involved a doubtful construction of the law, a responsibility which he was unwilling to take, and the reports for the use of members of Congress have not been printed. I regret this, because I believe it a matter of great political importance that these reports should go directly from the Representative to the constituent. It is one of the defects of our Government that it is too far removed from the attention of the people. In my judgment, it would be well if they were more frequently reminded that they had a Representative here who constantly cared for the interests of his constituents; that they had a part in the administration of the country; and it is not less worthy of remark that the Representative better knows who would appreciate this document so anxiously sought after. But, by a separate provision of the act, there was made an appropriation specially to this Department of \$50,000 for the printing of the Reports of 1872 and 1873. These have been printed and delivered to the Department for its distribution, and which has served to relieve it from the obligation it was under to its correspondents at home and abroad."

Wm. G. Le Duc became Commissioner in 1877. There were printed 300,000 copies of the report for this year, 224,000 for the use of
1877 the House of Representatives, 56,000 for the use of the Senate,
1878 and 20,000 for the use of the Department of Agriculture.
1880

Forestry of the Western States and Territories was the subject of a paper that appeared in the 1878 report. The spread of infectious and contagious diseases among domesticated animals was so great that Congress appropriated the sum of \$10,000 for an investigation. The reports of this investigation were published in this and subsequent volumes.

In the report for 1880, Commissioner Le Duc wrote: "The delay in getting the annual report of the department before Congress for distribution to the people of the country is something that can and should be remedied. The report of 1879, which should have been put into the hands of Congress for distribution before the adjournment of the early session in 1880, is not yet out of the Government Printing Office, and will not be in the hands of the farmers until the spring of 1881, entailing the unnecessary loss of a whole year. If the department was intrusted with its own printing it could be done in a reasonable time, and with no more expense than is now incurred in the Government Printing Office, which appears to be so overburdened with Congressional and other work that the large edition of the

annual report of the Department of Agriculture required is not and cannot be commenced until midsummer of the year following the one for which the report is made. The edition of our annual report is usually 300,000, and while larger than that of any annual book ever published, is not yet half large enough to meet the reasonable and pressing demand."

By a joint resolution, approved December 12, 1882, the Senate and House of Representatives approved the printing of the annual report 1881 for 1881 and 1882 in one volume. Geo. B. Loring was appointed 1882 Commissioner in 1881. In submitting his report to the President he wrote that he had continued the work as laid out by his predecessor. Some of the special investigations included: The artesian well in Colorado; cultivation of the tea plant; pleuro-pneumonia and other contagious diseases of animals; necessities and opportunities of American forestry; and the habits of insects injurious to vegetation.

The joint resolution of the Senate and House of Representatives provided for the printing of 400,000 copies of the 1884 report. It was 1884 during this year that the Bureau of Animal Industry was 1885 established by an act of Congress. The volume for this year contained reports of the commissioner, the chemist, the botanist, chief of the forestry bureau, chief of the Bureau of Animal Industry, the entomologist, and the statistician, and a special report on the cultivation of alfalfa.

Norman J. Colman became Commissioner in 1885. The annual report for this year contained in addition to the regular reports, two special papers: "Wheat Culture in India," by Rev. I. L. Hauser, and "Truck Farming," by A. Oemler. This and previous volumes contained several engraved plates, some colored.

When Mr. Colman submitted his report for 1888, he wrote that the year had been one of greater activity in the Department than ever 1888 before experienced. The reports of the various divisions and sections as published in the annual report were limited to articles of general interest to the whole country. Other reports were published in special bulletins. The report of the entomologist contained papers on the plum curculio, the fluted scale, the hop plant-louse, and silk culture - reports of the year's operations.

The chief of the Bureau of Animal Industry reported on the studies of hog cholera, swine plague, glanders, southern cattle fever, tuberculosis, and various maladies caused by animal parasites. The chemical study of lard and experiments in the manufacture of sugar were reported by the chemist. The section of vegetable pathology published reports on downy mildew of the potato, tomato diseases, plum-pockets, apple rusts, a disease of the sycamore, and report on peach yellows. The report of the statistician contained current crop statistics and condition of farm animals. The ornithologist and mammalogist had special reports on pheasants, the mink, the sparrow hawk, the short-eared owl, the food of crows, and the rose-breasted grosbeak.

The Office of Experiment Stations was established late in 1888. Its only report was on the origin and development of the experiment stations in the United States. The microscopist reported on the microscopic investigations of condiments and included several colored plates of his studies. The report on pomology included a paper on cultivated fruits, both native and introduced. The chief of the forestry division reported on the general field of research in forestry. The report of the seed division contained reports from States that had received seeds from the Department. Two special reports were in this volume: "Truck Farming - Its Application to the work of the General Farmer," by James K. Reeve, and "Ostrich Farming in America," by T. C. Duncan.

J. M. Rusk, who became Secretary of the Department in 1889, wrote: "The frequent issue of special bulletins from the various 1889 divisions relating to the work undertaken by them, instead of awaiting the issue of the annual report, already too bulky for the purpose for which I conceive it to be designed, meets with my unqualified approval, and I propose to greatly extend this practical method of intercommunication between the Department and its constituents." Mr. Rusk made several changes in the organization of the Department.

The Division of Records and Editing was organized in 1890, and George Wm. Hill became the chief. In submitting his annual report 1890 he wrote: "The great increase in the number of divisions 1893 preparing matter for publication, and the dual character of most of them - combining administrative duties with scientific research - have resulted in the necessity for important modifications in the character and scope of the Annual Report of the Department.... It is evident that the time has come when the Annual Report of the Department must offer to each chief of Division merely an opportunity for a business report to his chief of the work actually performed in the Division which he superintends, for a general review of the field of economic agriculture assigned to his division, and for presenting suggestions and plans for increasing the efficiency and extending the benefits of his work."

The Annual Report was continued through 1893 in the same manner. Chiefs of divisions gave a summary of the work accomplished in their divisions, plus the printing of some papers. The number of copies printed was raised to 500,000 in 1892.

J. Sterling Morton was appointed Secretary in 1893, and on June 21, 1894, he wrote a letter to the Hon. James D. Richardson, 1894 Chairman of the Committee on Printing, House of Representatives, in which he said: "I believe that the Annual Report of the Department of Agriculture, distributed to the farmers of the country in such large numbers, could be greatly improved by publishing it in two separate parts, as follows:

"Part I to contain purely business and executive matter, which it is necessary for the Secretary to submit to the President and Congress.

"Part 2 to include such carefully prepared and selected matter, with proper illustrations, as will especially interest and benefit the farmers of the country, excluding everything that belongs to Part I and including a general report on the work of the Department, written with special reference to the needs of the farming public.

"The advantages of such a division of the report are so apparent that no argument is needed to support them. The plan will give this Department the opportunity to prepare a report which will interest and benefit the farming classes more than anything which has hitherto been issued from it."

Section 73, paragraph 2 of "An act providing for the public printing and binding and the distribution of public documents" was approved January 12, 1895. In this section it is provided that - "The Annual Report of the Secretary of Agriculture shall hereafter be submitted and printed in two parts, as follows: Part one, which shall contain purely business and executive matter which it is necessary for the Secretary to submit to the President and Congress; part two, which shall contain such reports from the different bureaus and divisions, and such papers prepared by their special agents, accompanied by suitable illustrations, as shall, in the opinion of the Secretary, be specially suited to interest and instruct the farmers of the country, and to include a general report of the operations of the Department for their information. There shall be printed of part one, one thousand copies for the Senate, two thousand copies for the House, and three thousand copies for the Department of Agriculture; and of part two, one hundred and ten thousand copies for the use of the Senate, three hundred and sixty thousand copies for the use of the House of Representatives, and thirty thousand copies for the use of the Department of Agriculture, the illustrations for the same to be executed under the supervision of the Public Printer, in accordance with directions of the Joint Committee on Printing, said illustrations to be subject to the approval of the Secretary of Agriculture; and the title of each of the said parts shall be such as to show that such part is complete in itself."

It was decided that part 2 should be issued under the title of the Yearbook of the Department of Agriculture. The first of these was for the year 1894. Assistant Secretary, Chas. W. Dabney, Jr., wrote in the preface: "The present volume represents but imperfectly the ideal of what such a yearbook should be."

"This volume is divided into three sections:

"First. The Report of the Secretary of Agriculture for 1894, giving a general account of the operations of the Department during the year.

"Second. A series of papers, prepared for the most part by the chiefs of bureaus and divisions and their assistants, discussing either the general work of their bureaus or divisions, or particular lines of work with special reference to interesting and instructing the farmer.

"Third. An appendix made up of statistical tables and information useful for reference, compiled in the various bureaus and divisions.

"It is believed that the character of the volume can be improved from year to year until it shall become finally a standard book of reference for American farmers."

The volume contained 26 articles in addition to the report of the Secretary and the appendix. There were 598 pages, including a 20-page index, 7 plates, and 140 text illustrations. Some of the titles were: "Education and Research in Agriculture in the United States," by A. C. True; "What Meteorology Can Do for the Farmer," by M. W. Harrington; "The Pasteurization and Sterilization of Milk," by E. A. de Schweinitz; "Food and Diet," by W. O. Atwater; and "Best Roads for Farms and Farming Districts," by Roy Stone.

D. E. Salmon wrote in an article on Federal meat inspection: "The inspection of meat by the Federal Government was begun in May, 1891, under the jurisdiction of the Bureau of Animal Industry, and in accordance with an act of Congress approved March 3, 1891.... There are few citizens of the country who realize the importance of a rigid inspection of meats by competent inspectors. In the days when animals were killed by the local butcher, whose reliability could be determined, and who was generally known to the consumer, there was not the same reason for suspicion as to the quality of meat which exists at present."

Milton Whitney wrote in an article on soils in their relation to crop production: "It may be asked what advantage it would be to understand soil conditions and what control of them is possible. As regards the first question, this knowledge will make it possible intelligently to classify the soils according to the conditions which they maintain and predict what classes of crops they will prove adapted to grow.... As regards the second question, it is quite possible, through intelligent methods of cultivation, of cropping, and of fertilization, to change the conditions maintained by soils by changing their physical texture. It is likewise possible that we shall be able in time to control the amount of water taken up from a soil and transpired by plants."

Theobald Smith gave some practical suggestions for the suppression and prevention of bovine tuberculosis: "The infected animals might be separated at once from the noninfected. The worst cases should be killed and buried deeply or burned.... After all infected animals have been segregated or killed, as the case may be, and the stables disinfected, the remaining healthy animals should be retested with tuberculin within a certain period of time, from three to six months after the first test, to make sure that no disease has been overlooked."

Secretary James Wilson, in calling upon the chiefs of bureaus, divisions, and offices of the Department of Agriculture for contributions to the Yearbook for 1897, said: "It is my earnest wish that 1897 the Yearbook shall be of such a popular character and of such value to practical agriculture as to justify the enormous edition issued by Congress. Every one contributing to it should be fully impressed with the fact that every page contained in the Yearbook costs the country \$500, and is designed to be distributed to half a million persons....

"The editing of the Yearbook for 1897 will be confided, as in the case of the other publications of the Department, to the Chief of the Division of Publications, under the personal direction of the Secretary.

"...in addition to such other suitable articles as may be necessary, the forthcoming Yearbook, 1897, should contain an article from each chief of bureau, division, and office outside of those that are purely administrative, which shall set forth in plain terms the relation of the work of his bureau, division, or office to the farmer. The existence of the Department is justified precisely so far as it aids the farmer to be a successful farmer, and my desire is that the article called for should present clearly to the reader just how the division of the work in your charge achieves that purpose."

George William Hill, chief of the Publications Division and editor of the Yearbook wrote in the preface: "The practical carrying out of the work as thus outlined has called for a subdivision of the book into four main parts. The first, as usual, consists of the annual report of the Secretary of Agriculture for the fiscal year 1897, and its publication fills the requirement of the law that the Yearbook shall "include a general report of the operations of the Department."

"The second part contains the papers setting forth the work of the several bureaus and divisions and bears the general title 'Work of the Department for the Farmer.'

"The miscellaneous papers in the third part, eighteen in number, were, with a single exception, prepared by the chiefs of the bureaus and divisions and their expert assistants....

"The fourth part, the "Appendix," contains information which should be available to every farmer and which is of value to all who are interested, even indirectly, in agriculture....

The Yearbook for 1898 conformed to the plan originally adopted and consisted of three parts. George William Hill wrote: "While 1898 preserving the main features of former years, an effort has been made to give the Appendix of the present Yearbook the character of an agricultural directory. Thus, in addition to the usual Department directory and the directory of colleges and experiment stations, there have been included lists of the principal

officials having charge of agriculture in the several States; of managers of farmers' institutes; of national and State dairy officials; of the several associations of cattle, horse, and sheep breeders; of the State veterinarians and State health officers; of the forestry officers of the different States and of the forestry associations; of the officers of the horticultural and kindred societies, etc...."

The volume contained 36 articles of which some of the titles were: "New Work in the Weather Bureau," by Willis L. Moore; "Pollination of Pomaceous Fruits," by M. B. Waite; "Weeds in Cities and Towns," by Lyster H. Dewey; "The Use of Kites in the Exploration of the Upper Air," by C. F. Marvin; "The Public Domain of the United States," by Max West; and "Keeping Goats for Profit," by Almont Barnes.

Secretary Wilson said in his report for 1898 on the quota of copies of the Yearbook for the use of the Department that "For several years this allotment has consisted of only 30,000 copies, which is inadequate to supply the correspondents and others who receive no other compensation for the valuable services they render the Department, to say nothing of the demands from miscellaneous applicants, both domestic and foreign. For such purposes there should be at least 20,000 copies, making the entire quota of the Department 50,000....

"...For 1899 I am considering the propriety of making a special effort to prepare a publication which shall contain a resume of the achievements in the United States in every branch of science as related to agriculture during the nineteenth century for distribution at the Paris Exposition. At least 50,000 copies could be advantageously distributed, and I have no doubt Congress will vote an increased appropriation for such purpose.

The Secretary's idea was carried out. The editor, Mr. Hill, wrote in the preface to the volume, "It is believed to present for 1899 the first time within the covers of a single volume a fairly comprehensive review of the progress and development of a century in almost every branch of scientific inquiry having a direct practical bearing upon agriculture.

"It is gratifying to record in this connection that Congress has made provision for an extra distribution of this number of the Yearbook by providing a special edition to be available for foreign distribution during the time of the Paris Exposition of 1900...."

The volume contained 880 pages. In addition to the report of the Secretary, there were 26 articles, some of which were: "Progress in Economic Entomology in the United States," by L. O. Howard; "Agricultural Education in the United States," by A. C. True; "The Relation of Chemistry to the Progress of Agriculture," H. W. Wiley; "Dairy Development in the United States," by Henry E. Alvord; "The Practice of Forestry by Private Owners," by Henry S. Graves; "Development of Agricultural Libraries," by Charles H. Greathouse; "Rise and

Future of Irrigation in the United States," by Elwood Mead; and "Development of Transportation in the United States," by Angus Sinclair. The appendix contained such items of interest to the farmer as: Publications issued during the year 1899; farmers' reading courses; review of weather and crop conditions, season of 1899; State standards for dairy products, 1900; cotton exchanges; and imports and exports of agricultural products. There were numerous illustrations in the volume.

The editor wrote in the preface to the Yearbook for 1900: "In spite of efforts toward diminishing the somewhat inconvenient bulk of the Yearbook, the present edition contains as many pages as its predecessors, and is more profusely illustrated. This volume, however, contains, besides the Report of the Secretary and the Appendix, thirty-one articles, five more than last year. With one exception, every article was prepared by an employee of the Department, and each Division of original work is represented by one or more articles.... The illustrations comprise eighty-seven plates, nine of them colored, and eighty-eight test figures."

Some of the titles in this volume were: "Rabies: Its Cause, Frequency, and Treatment," by D. E. Salmon; "The Scale Insect and Mite Enemies of Citrus Trees," by C. L. Marlatt; "Development of the Trucking Interests," by F. S. Earle; "The Date Palm and Its Culture," by Walter T. Swingle; "Free Delivery of Rural Mails," by Charles H. Greathouse; "The Use and Abuse of Food Preservatives," by W. D. Bigelow; and "The Influence of Refrigeration on the Fruit Industry," by William A. Taylor.

Mr. Greathouse wrote in his article on free delivery of rural mails: "The first routes bearing this name were established on October 1, 1896, at Halltown, Uvilla, and Charlestown, W. Va.... The whole United States is now laid out in four divisions for the inauguration and maintenance of this service, and the work is going forward with steadily increasing volume.... The President McKinley describes this as the most striking new development of the postal service, which 'ameliorates the isolation of farm life, conduces to good roads, and quickens and extends the dissemination of general information!'"

The editor paid tribute to William Saunders, who died in 1900. Mr. Saunders had been botanist and superintendent of propagating gardens for the Department of Agriculture for 38 years.

The Yearbook for 1901 and 1902 continued in the same manner. The 1901-2 volume for 1901 contained 846 pages, while the volume for 1902 contained 912 pages.

The Secretary wrote in his annual report for 1901: "The Yearbook of the Department continues to be in great demand. It is difficult

to keep it within the limits of a convenient book, owing to the immense variety of subjects covered by the work of the Department which should be represented in it; also owing to the mass of important information, statistical and otherwise, which finds a place in the Appendix, and which, as far as I know, is not available elsewhere."

The editor wrote in the preface of the volume for 1903: "The tendency of the Yearbook to increase in size, following very naturally 1903 the growth of the Department whose work it deals with, led to the production for several years of a book of inconvenient dimensions, and threatened, unless a different system were pursued in its preparation, very soon to make a most unwieldy volume. An earnest effort had to be made, and a change was therefore inaugurated in the preparation of the present volume, with a view to reducing its bulk. The result has been to reduce it by about 200 pages...."

Some of the titles of the 32 articles were: "Relation of Precipitation to Yield of Corn," by J. Warren Smith; "Relation of Cold Storage to Commercial Apple Culture," by G. Harold Powell; "The Adulteration of Drugs," by Lyman F. Kebler; "Macaroni Wheat," by James H. Shepard; and "The Nation's Farm Surplus," by George K. Holmes.

The following year, Mr. Hill wrote: "The Yearbook is the leading publication of the Department of Agriculture, and the present 1904 volume, 1904, presents a large amount of information valuable to the farmers of the country....

"Food law enforcement has made considerable progress in the past year, and a valuable summary of results appears in the Appendix."

A few of the titles were: "The Castor Oil Industry," by Charles M. Daugherty; "The Nut Weevils," by F. H. Chittenden; "Consumers' Fancies," by George K. Holmes; "The Annual Loss Occasioned by Destructive Insects in the United States," by C. L. Marlatt; and "Animal Breeding and Feeding Investigations by the Bureau of Animal Industry," by D. E. Salmon.

The Yearbooks continued in the same style and character for several years.

Mr. Hill wrote in the preface to the 1907 Yearbook: "Economy in publication is the fixed policy of the Department, and in 1907 conformity with this policy every effort has been made by the Editor to secure brevity in the reports, papers, and tables of the Yearbook, and to exclude illustrations which, though they might add to the attractiveness of the book, would not enhance its instructional value."

Joseph A. Arnold, editor of the 1908 Yearbook said: "The Yearbook issued by the U. S. Department of Agriculture is the most important publication of the Department. Its scope is wide and its character general, while nearly all other publications of the Department are limited in scope and special in character. In the Yearbook the aim is to bring together and present in brief popular style the best information on agriculture and subjects related thereto."

Edwy B. Reid, editor and chief of the Division of Publications in 1918, wrote in his annual report to the Secretary, D. F. Houston: "The printing of the Yearbook of the department on a half-tone perfecting press recently installed at the Government Printing Office has resulted in a considerable reduction in the cost of production, with an improvement in the appearance of the publication. Methods of production are contemplated for the coming year which, it is believed will still further improve the appearance of the Yearbook for 1919 and will result in a material reduction of its cost to the public."

John L. Cobbs, Jr., chief of the Division of Publications, wrote in his annual report: "The Yearbook (1920) was issued in new and more artistic form. The illustrations and presswork in the volume are an improvement over previous issues and the style of the articles is more readable. The volume has been pronounced by competent critics to be the best Yearbook ever issued by the Department."

When Henry C. Wallace became Secretary of Agriculture in 1921, the depressed condition of American agriculture gave unusual importance to the economic problems of the farmer. A series of Yearbooks was planned in which detailed consideration would be given to the economic phases of farm production and marketing. The Yearbook for 1921 was the first in this series.

Mr. Wallace wrote in the Foreword to the volume: "The Yearbook for 1921 is a departure from previous Yearbooks. It represents an effort to present in a somewhat detailed way the economic situation with respect to four of our principal agricultural products - wheat, corn, beef, and cotton. The subject is treated in four separate chapters. These discussions take the place of the briefer, less comprehensive articles, chiefly on production subjects, presented in previous Yearbooks....

"The Yearbook for 1921, therefore, emphasizes the economic side of our agriculture, because help in their economic problems is now the most urgent need of our farmers."

"While the present volume treats only of four phases of the situation, succeeding volumes will take up other products and conditions, so that in the course of a few years a fairly complete picture of the whole economic situation may be presented."

This volume maintained the Secretary's Report and the Appendix as the previous volumes had. This was the first Yearbook to contain a notice that it was for sale by Superintendent of Documents, Government Printing Office. The price was \$1.25.

The Yearbook for 1922 was planned by a Committee. C. W. Pugsley was chairman. Henry C. Wallace, Secretary, wrote in the Foreword: 1922 "The Yearbook for 1922 continues the plan adopted for the Yearbook for 1921 of presenting in a somewhat detailed manner the economic situation regarding five of our leading agricultural products - hogs, dairy, tobacco, small grains other than wheat, and forestry.... The object is to give the history of each subject, the present situation, and the future outlook.

"The World War and the unprecedented advance in prices of all commodities culminated in a demand by farmers for the collection of market statistics by governmental agencies. The precipitous decline of prices following the World War resulted in an unusual interest in price data. The statistical part of the Yearbook has been accordingly expanded to meet this demand. About 150 pages of statistics have been added to the 1922 Yearbook. The additions include market prices, freight rates, receipts and shipments, foreign prices, and forestry statistics."

The economic phase of agriculture was continued in 1923, and Secretary Wallace wrote in the Foreword: "This volume contains similar 1923 studies as to sugar, the sheep industry, our forage resources, the utilization of land for crops, pasture, and forests, and the economic aspects of land tenure, prefaced by the annual report of the Secretary dealing with the agricultural situation in a general way and with some of the regular work of the department. Included in the present volume is the special report on the wheat situation made to the President November 30, 1923. These articles are followed by the statistical portion which has again been enlarged to include important additional material, particularly on livestock production, fertilizer production and consumption, forestry, and domestic and foreign prices of farm products."

This book which contained 1, 284 pages, was prepared under the general supervision of a committee with Dr. O. E. Baker serving as editorial secretary.

L. J. Haynes, Director of Publications, wrote in his annual report for this year: "On account of the saving possible the Yearbook this year was changed to 10-point solid type set in octavo measure, which simply meant a little smaller margin at top and sides of the page. It is estimated that the space saved would cost the Government about \$25,000 less money than it would have cost had the material been set in the same style as previous editions."

The price of the volume continued to be \$1.25.

Howard M. Gore became Secretary upon the death of Mr. Wallace. He continued the series started by Mr. Wallace and wrote in the 1924 Foreword to the 1924 volume: "The present volume contains articles on highways and highway transportation; farm credit, farm insurance, and farm taxation; hay; the poultry industry; weather and agriculture; as well as the late Secretary's annual report to the President.

Farming in the United States is in much better condition now than it was when this series of Yearbooks was started. ... It is hoped that the studies in this volume will help the farmer to deal intelligently with the readjustment problems still to be faced."

This volume contained 1,252 pages and sold for \$1.50 per copy.

The Yearbook for 1925 was the fifth and last of the series dealing with the economic aspects of agriculture. The fruit and 1925 vegetable industry was the subject of this large 1,537-page volume.

W. M. Jardine, Secretary, wrote in the Foreword: "The articles on fruits and vegetables include historical material relating to fruit and vegetable growing in this country, in addition to the present status of the fruit and vegetable industry, its marketing problems, its geographical distribution, its cultural methods, and the economic factors that determine its development. Considerable space is devoted to plant pests and diseases and to methods of combating them. Recent progress in drying, canning, and pickling is recorded, and attention is given to the problem of utilizing surpluses and by-products of fruits and vegetables. Methods of financing the industry are described and discussed.

"In the five years covered by the series of yearbooks now concluded, American agriculture has been harrassed with economic problems as never before. Although the present volume deals with a branch of agriculture that has been less affected than some other branches by the postwar depression, the fruit and vegetable industry is not without pressing economic problems. I hope that this Yearbook may help it to deal with such problems effectively."

The Yearbook for 1926 was prepared under the supervision of Nelson Antrim Crawford, Director of Information, with Arthur P. 1926 Chew as associate editor. Secretary Jardine wrote in the Foreword: "The bulk of their the Yearbooks circulation is among everyday farmers. It is highly important that they be accurate, broad, interesting, and useful to the farmer.

"What the farmer wants to know is the new discoveries which have been made in agriculture — results of research by scientists, experiences of farmers' marketing organizations, authentic data on quantity and quality of agricultural production. Material of this sort is presented in the present Yearbook. Up-to-date information

is offered from every phase of agriculture.... Subsequent Yearbooks, it is contemplated, will follow a similar plan, keeping the picture of agriculture constantly up to date."

The articles in this volume, arranged in alphabetical order, are under the general title of "What's New in Agriculture."

The Yearbooks from 1926 through 1932 continued in this style. Besides the report of the Secretary and the statistics of agriculture, 1926 several hundred articles, arranged alphabetically, appeared 1932 under the title, "What's New in Agriculture."

Secretary Jardine wrote in the Foreword to the 1927 volume: "The Yearbook of Agriculture for 1926, which was characterized distinctly by brief articles on new discoveries in agriculture and kindred fields, received widespread commendation. Such adverse criticism as was directed toward it was based on the conviction that the Yearbook should be prepared primarily for research workers, professors, and students rather than for farmers. This point of view does not seem to me well founded.... The Department of Agriculture, created for the farmer, has, in my estimation, an obligation to put into his hands a Yearbook informative, interesting, and useful to him."

Milton S. Eisenhower became Director of Information in 1928 and editor of the Yearbook for that year. Arthur P. Chew was associate editor.

Beginning with the 1930 issue, the Yearbook, in conformity with the practice generally followed in the publication of Yearbooks, was designated by the year in which it was printed rather than by the year surveyed. Thus the 1930 Yearbook surveyed agricultural conditions in 1929. The new system of dating more truly indicated the up-to-date character of the volume. The procedure did not break the continuity of the statistical and other material published, nor did it involve any omission in the Yearbook series.

No Yearbook carried the date 1929.

The Yearbook for 1933 differed in form and content from the six preceding books. The latest scientific achievements of 1933 the Department were related in the report of Secretary Hyde 1935 instead of treating them as separate articles. This permitted space for describing the agricultural effects of the depression and for summarizing recent developments in farm practice.

It was said in the Foreword to this volume: "The object is twofold: (1) To show in some detail what the depression has done to agriculture as a whole and to the leading agricultural enterprises separately; and (2) to indicate what the farmers themselves are doing or can do with the aid of science to improve the situation.... Grouped under commodity headings, the articles in this volume survey broadly the economic and technical developments that have dominated agriculture since the war."

The Yearbook for 1934 reported what had been done toward adjusting production and promoting efficiency. The annual report of Secretary Henry A. Wallace told about action taken under the Agricultural Adjustment Act of 1933. Following the style of 1926 through 1932, articles were published under the general title of "What's New in Agriculture."

The Yearbook for 1935 also reported on the results of research.

A major change was made in the Yearbook in 1936. As Henry A. Wallace wrote in the Foreword to Better Plants and Animals: "For 1936 some time past the book has presented brief summaries of miscellaneous new developments in agriculture. This year it is devoted to exploring a single subject - the creative development of new forms of life through plant and animal breeding. The material is the outcome of a survey of superior germ plasm made by the Committee on Genetics. What this superior germ plasm is and how it is used constitute a story of surpassing importance to the modern world.

"Most of the voluminous statistics usually gathered together in the Yearbook are here notably absent. These statistics, the tail of the book, had grown so large that they were wagging the dog. They have been severed, and beginning this year will be published in a separate volume...."

Gove Hambridge became editor of the Yearbook, a post he held until 1942. Under his wise guidance, the Yearbooks entered a new period of importance. He explained in a summary to the volume how the book developed: "It was decided that the most appropriate place to present this material (on germ plasm) would be the Yearbook of Agriculture, since nothing is of more vital concern to farmers than what is being done to improve plants and animals. The present Yearbook, therefore, is largely devoted to a series of articles that grew out of the survey of germ plasm. The results of the survey are given, together with a historical summary of what has been done in the past, a discussion of present work and future possibilities, some accounts of the methods used in modern breeding, and in most cases a brief discussion of theoretical research dealing with inheritance in the particular plant or animal. Only 19 major crops and types of livestock could be dealt with in the present volume, but the series will be continued in the 1937 Yearbook with articles on vegetable, fruit, and forage plants, flowers, forest and nut trees, honeybees, and some of the animals of less economic importance."

This 1,189-page volume contained a glossary of genetic terms and an index.

The second volume of Better Plants and Animals was published in 1937.

Mr. Wallace wrote in the Foreword: "In sending out to the public this second and last of the two Yearbooks on genetics and breeding, 1937 I would not want anyone to think that they complete the account of the efforts of plant and animal breeders in the United States. On the contrary, I would wish these Yearbooks to be looked on as pointing the way toward a field of activity that will accomplish much more in the future than has been accomplished in the past. Life is always changing because environment is always changing...."

Mr. Hambidge said: "This book rounds out the work of the committee on genetics appointed by the Secretary of Agriculture in 1933. The task set for the members of the committee was to make a national and to some extent an international survey of practical breeding and genetic research with those plants and animals that are important in American farming.... The present volume covers an enormous and varied field, dealing with garden vegetables, northern tree and bush fruits, sub-tropical fruits, flowers, nut trees, forest trees, forage grasses and legumes, Angora and milk goats, turkeys, ducks, fur-bearing animals, honeybees, and finally that good friend of the farmer, his dog.

"Many of the articles are unique in that nothing of a similar kind has been done in their field, and the two Yearbooks together probably contain the most complete and up-to-date account of breeding work and genetic research in relation to farm plants and animals that can be found gathered in one place."

The volume contained 1,497 pages.

Soils and Men, the Yearbook for 1938, was the third in the new series dealing with special subjects. The volume was dedicated to 1938 the memory of Curtis Fletcher Marbut, who was chief of the Soil Survey Division in the Department of Agriculture for many years.

H. G. Knight was chairman of the committee that planned the book. The book was divided into five parts. Bushrod W. Allin was in charge of Part I, the Nation and the Soil, that dealt with the problems and causes of soil misuse from the economic and social standpoint, and the possible remedies from the same standpoint. A. L. Patrick was in charge of Part II, The Farmer and the Soil, that dealt with a wide range of soil-management practices that could be applied by individual farmers. M. A. McCall was in charge of Part III, Soil and Plant Relationships, that dealt with the soil requirements of plants and the relationship between soil and plant composition. Charles E. Kellogg was in charge of Parts IV and V. Part IV, Fundamentals of Soil Science, dealt with the physical, chemical, and biological nature of the soil. Part V, Soils of the United States, described the soils of the Nation.

Mr. Hambidge wrote in the summary: "Probably no other book has dealt with the soil from so many angles as this Yearbook. It represents genuine collaboration between many men; for example, more than 100 authors have contributed to it."

Secretary Wallace wrote in the Foreword: "Nature treats the earth kindly. Man treats her harshly. He overplows the cropland, overgrazes the pastureland, and overcuts the timber land. He destroys millions of acres completely. He pours fertility year after year into the cities, which in turn pour what they do not use down the sewers into the rivers and the ocean. The flood problem insofar as it is man-made is chiefly the result of overplowing, overgrazing, and overcutting of timber."

"This terribly destructive process is excusable in a young civilization. It is not excusable in the United States in the year 1938....

"In this book the effort is made to discover man's debt and duty to the soil. The scientists examine the soil problem from every possible angle. This book must be reckoned with by all who would build a firm foundation for the future of the United States."

The Annual Report of the Secretary of Agriculture to the President was omitted from this volume and published as a separate document.

A glossary of special terms, a reference list of the literature cited in various articles, and an index are included in this 1,232-page volume.

Milton S. Eisenhower, Director of the Office of Information, said in his annual report to the Secretary: "The Yearbook of Agriculture entitled Soils and Men has been stated by citizens and commentators to be one of the most valuable works ever issued by the Department."

Food and Life was the Yearbook for 1939. The 1,165-page volume was divided into two parts, human nutrition and animal nutrition.

1939

Secretary Wallace wrote in the Foreword: "Of all the sciences and arts, one of the greatest is the feeding of animals and human beings. Forty years ago the scientists thought the problem was simple — discover the needs for protein, fats, carbohydrates, and a few minerals, analyze the foods for these substances, and then so blend the foods as to furnish an adequate supply of each. Today we know that there is much more to it than this. The old science is still fundamental, but the new science is continually adding to it knowledge of a whole array of substances ... needed by the body.

"Two-thirds of this book deals with the nutrition of animals and only one-third with that of human beings; nevertheless, even the animal section contains much information of fundamental value with regard to human nutrition....

"People as well as animals must be well fed if they are to do their best and give their best."

O. E. Reed was chairman of the Yearbook Committee on Nutrition. Louise Stanley was chairman of the subcommittee on human nutrition, C. A. Cary was chairman of the subcommittee on animal nutrition.

The book was dedicated to Wilbur Olin Atwater, who died in 1907. Mr. Atwater, who organized the Office of Experiment Stations in the Department, was one of the pioneers in modern nutrition.

All of the articles were summarized by the editor, Gove Hambridge, in the first 94 pages of the book.

Farmers in a Changing World was the 1,215-page Yearbook for 1940.

1940

Claude R. Wickard, Secretary of Agriculture at the time the book was published, wrote in the Foreword: "This Yearbook on economic and social conditions in agriculture in the United States today was prepared under the direction of the former Secretary of Agriculture, Henry A. Wallace, and there is little that I can add to his Foreword, which follows and which was written before the book went to press.

"So swiftly have events moved in recent months that some of the book will undoubtedly be "outdated" before it is published. The whole question of foreign trade, for example, is in a state of flux, and the country is now plunged in a vast preparedness program that will affect employment and wages, and therefore the farmer's domestic market."

Henry A. Wallace wrote in his Foreword: "To build an economic democracy that will match our political democracy, our people must have the facts.

"Few agencies have been as persistent in digging out facts as the Department of Agriculture. Its scientists have a long and honorable record in this never-ending quest, and they have added much to human knowledge in fields that are vital to every one of us....

"The investigations of the Department of Agriculture are not confined to the natural sciences. Under the necessities of modern life — many of them arising out of the revolutionary discoveries of science — the Department has had to pay more and more attention to economic and social problems as well. It has been building up a notable body of knowledge in this field.

"This book tries to deal with these problems as the previous Yearbooks dealt with some of the great problems in the natural sciences - to sum up needs, methods, results, and at the same time indicate shortcomings....

"I should like to think it is a step, even if a halting one, toward that marriage of the social and the natural sciences which I believe can be one of the great contributions of democracy to civilization."

A postscript in the front of the volume said: "Since the preparation during 1939 of most of the material in this book, the international situation has changed swiftly and tragically. The thoughts and lives of people all over the world have had to be reoriented to these changes. Unquestionably the turn of world events will profoundly affect the problems of agriculture in the United States in ways not entirely predictable. The reader should keep this in mind in everything that follows.

"Yet the underlying theme of the book...is powerfully emphasized by these recent events."

M. L. Wilson was chairman of the 1940 Yearbook Committee.

Gove Hambridge said in the summary: "This volume may be considered as a log book of a journey toward a future that must always remain inscrutable to human beings....

"Most though not all of the 54 articles in the book were prepared by workers in the Department of Agriculture whose job it is to conduct research in agricultural problems and to carry out laws relating to agriculture passed by the Congress of the United States....

"The book was divided into 7 parts. Part I, The Farmer's Changing World, is a history of agriculture in the United States from the colonial period through 1939, with special emphasis on changing needs and conditions that have shaped national policies during these centuries. Part 2, Agriculture and the National Welfare, deals with relationships between producers and consumers, agriculture and industry, farm people and city people. Part 3, The Farmer's Problems Today and the Efforts to Solve Them, is a comprehensive survey of current agricultural problems and current efforts to solve them.... Part 4, Farm Organizations, reports the viewpoints and recommendations of three national organizations of farmers in the United States.... In Part 5, What Some Social Scientists Have to Say, a few representatives of different social sciences view agriculture as a whole from their particular angles. Part 6, Democracy and Agricultural Policy, deals with the relationship of policy making to democratic processes. Part 7, Essentials of Agricultural Policy, is an attempt to sum up what has gone before in terms of today's and tomorrow's policies."

The volume contained an appendix, which was a chronological account of American agricultural history, and an index.

Climate and Man was the Yearbook for 1941

1941

Secretary Wickard wrote in the Foreword: "Next to crop prices, nothing is more important to the farmer's business than the weather, and in fact the weather often has a strong influence on prices....

"Weather science is one of the large family of sciences closely tied up with agricultural operations, from the smallest to the largest....

"The present Yearbook of Agriculture carries on the work of the preceding volumes, each of which has covered some major aspect of science fundamental to the use of our agricultural resources. This volume takes up weather and climate. Although the Weather Bureau was transferred from the Department of Agriculture to the Department of Commerce in a Governmental reorganization that took place after this book was under way, work on it was continued because no series of volumes on science in agriculture could be complete without including weather."

F. W. Reichelderfer, of the Weather Bureau, was the chairman of the Yearbook Committee that planned this 1,248-page volume.

Gove Hambidge wrote in his summary: "The importance of this whole business of climate and weather to agriculture hardly needs to be emphasized. Weather science is important to everyone, but agriculture and navigation on the sea have traditionally been the two fields in which it was most vital; hence the long tie-up between the Department of Agriculture and the Weather Bureau of the United States."

The book was divided into five parts: Part I, Climate as a World Influence; Part 2, Climate and Agricultural Settlement; Part 3, Climate and the Farmer; Part 4, The Scientific Approach to Climate and Weather; and Part 5, Climatic Data.

In the last part was a set of maps of climate and weather conditions throughout the United States.

Keeping Livestock Healthy, the 1,276-page Yearbook for 1942, was divided into nine parts: Fundamentals of Disease and Insect Control; Important General Diseases Common to Several Species; Common Diseases and Parasites of Horses and Mules; Diseases and Parasites of Cattle; Diseases and Parasites of Swine; Diseases and Parasites of Sheep and Goats; Common Diseases and Parasites of Poultry; Common Diseases and Parasites of Dogs and Cats; and Wildlife Diseases and Parasites.

Chairman of the Yearbook Committee for this year was John R. Mohler, of the Bureau of Animal Industry.

Secretary Wickard wrote in the Foreword: "Few persons not engaged in the livestock business realize the number, variety, and seriousness of the diseases and parasites that attack domestic animals or the care and skill necessary to keep them healthy under the conditions of intensive production that prevail in this country."

Each of the articles is briefly summarized. Gove Hambidge wrote in the summary: "Every livestock man knows that keeping animals healthy is a major part of the production job, both for himself as an individual and for the Nation. This Yearbook ... is intended to serve as a manual or reference book of animal health.... It covers all classes of livestock - horses and mules, dairy and beef cattle, swine, sheep and goats, poultry, and even dogs and cats, which are so useful on many farms."

The appropriations for the Yearbook were suspended during the war years and were not resumed until 1947. However, the Appropriation Act of 1944 directed the Department to reprint 231,250 additional copies of the 1942 Yearbook for distribution by Members of the Congress.

Science in Farming, the 1943-1947 Yearbook, contained 944 pages, besides 136 pages of pictures.

1943-
1947

Clinton P. Anderson, Secretary of Agriculture, wrote in the Foreword: "On my farm in New Mexico and on farms the country over I have watched, marveling, the onward surge of science in farming.... We have alfalfa, wheat, flax, and oats that are wonderfully resistant to plant diseases. We can buy a kind of chemical that kills weeds and, used in another way, stimulates the growth of fruits and vegetables.... These are results of a few years of agricultural research. More are coming. They, and many more, are told in this Yearbook, in a continuing story that holds a deep meaning for city people no less than for farmers."

Alfred Stefferud, who became editor of the Yearbooks in 1945, wrote in the Preface: "This book was prepared primarily for farmers, but we have always had in mind other persons whose interests and work have to do with gardening, chemistry, beekeeping, stock raising, conservation, horticulture, housekeeping, and such. The Yearbook should be particularly useful to returning servicemen who want to farm and to persons who will find in these pages details of a product that may help them build or enlarge businesses of their own."

The book was divided into 10 sections: Backgrounds, Animals, Plants, Trees, Soils, Insects, New Products, Food and Clothing, New Practices, and Conclusions.

W. V. Lambert was chairman of the Yearbook Committee for this volume. Other members were Hugh C. McPhee, O. E. Reed, Carl F. Speh, F. C. Bishopp, M. A. McCall, C. M. Coons, Sherman E. Johnson, Ernest G. Moore, W. H. Larrimer, and Mark L. Nichols.

The 135 chapters told of research in the past years on breeding and feeding of livestock, animal diseases, poultry, genetics, plant growth, and vegetables.

Grass was the title of the Yearbook for 1948.

1948

The volume, which contained 892 pages, 16 pages of colored pictures, 16 pages of black and white pictures, and an index, was divided into 4 sections. The first, Grass in the Nation's Life, dealt with the subject generally. Grass in the Ten Regions, discussed the subject in the regions of the United States and the Territories. Grass in a Plant Round-up contained descriptions of grasses and legumes. The last section, Grass in Tables, contained information on seeding mixtures, factors that affect the future of grassland farming, and a list of grassland plants mentioned in the book.

Secretary Anderson wrote in the Foreword: "Grassland agriculture is a good way to farm and to live, the best way I know of to use and improve soil, the very thing on which our life and civilization rest.

"Through the foods that come from it, grass can give us better health. It is our alliance with nature. It is a tool against floods and a guardian of the water supplies of cities."

The editor's preface said: "This book is the first word, so to speak, on the subject of grass, legumes, and the associated herbage, for, regardless of its importance, grass has been a comparatively neglected matter-of-course. We hope it will not be the last word....

"It has many articles on how farmers, ranchers, poultrymen, livestock raisers, dairymen, and the conservationists can grow and use grasses and legumes....

"It is therefore a book for city people as well as for farmers. It contains information on grass for lawns, parks, roadsides, playgrounds, and so on, but more than that, it is about a subject of concern to everyone, wherever he lives or whatever he does for a living."

This book was the first to be printed in a two-column format which made for easier reading and permitted more words to the page.

Members of the Committee that planned the Yearbook for 1948 were: M. A. McCall, O. S. Aamodt, P. V. Cardon, M. A. Hein, J. K. McClaren,

Charles E. Kellogg, R. B. Gray, Fred V. Grau, R. E. Hodgson, George A. Rogler, N. R. Ellis, H. C. McPhee, Edward H. Graham, Walter C. Lowdermilk, W. R. Chapline, William A. Dayton, Carl P. Heisig, Vance G. Sprague, Henry L. Ahlgren, Roy L. Lovvorn, Roy J. Jordre, D. A. Savage, Raymond Price, and H. A. Schoth.

The 1949 Yearbook, Trees, contained 944 pages, 16 pages of colored picture, and many text illustrations.

1949

Dana Parkinson, of the Forest Service, was chairman of the Yearbook Committee that planned the book. Other members were: F. C. Craighead, L. S. Gross, L. M. Hutchins, W. H. Larrimer, C. B. Manifold, Curtis May, John M. Miller, Arthur M. Sowder, and Arthur Spillers.

Charles F. Brannan, Secretary of the Department of Agriculture, wrote in the Foreword: "I wish, for several reasons, that every American might have the opportunity to read this book about trees. First, the book underscores the importance of forests to our national and individual prosperity, security, and happiness. Of all the figures and facts marshalled here in proof of this importance the most striking to me is that our drain of saw timber is one and one-half times its rate of growth. Other proof is close at hand - the wooden pencil with which I write, the chair I sit in, my desk, and the doors of my office."

The editor wrote in the Preface: "We have tried here to put into clearer perspective some items of history, importance, administration, and outlook that so far have been in scattered form. We have tried to explain another broad segment of the Department's work. We have tried to tell the essentials of choosing, planting, and growing trees as a farm crop, as a renewable national treasure, as a necessary part of country and city life. We have tried to make a book that is practical and useful for all Americans and interesting and inspiring for those who are unaware of the beauty and delight of the woods. We have tried to tell how and why to plant trees and care for them, and to offer a sort of forum to persons of divergent viewpoints, with all of which we do not necessarily agree."

The book was divided into four main sections. The first, "The Tree, was an introduction that considered the individual tree. Trees and Homes, contained articles on trees for the country home, city trees, and shade trees for the various regions of the United States. Forests and Men, had articles on forests and soils, experimental forests, private forests, forest companies, the national forests, forest fires, and insects and diseases of forests. The last section, Lists and other Aids, contained an illustrated list of important forest trees, a glossary, references for further reading, and charts and tables that showed the location and use of forests in the United States. It also contained a vacation guide to the national forests.

The Appropriation Act for 1950 provided no funds for a new Yearbook, instead the Act called for reprinting Grass, the 1948 Yearbook.

Crops in Peace and War, the Yearbook for 1950-1951, contained 942 pages, a 16-page picture section, entitled "In the Labora- 1950- tory," and an index. 1951

Secretary Brannan wrote in the Foreword: "Every American can be proud of the accomplishments described in this book. Proud, yes, but more than that in this challenging age. Thankful, as well, for the benefits they bring in time of peace and for the contributions they make as we mobilize for defense. They exemplify how and why free men work in a free society."

The book was largely a report of the work of the Department's four regional research laboratories that Congress authorized in 1938 to study the possibilities of using surplus products in new ways. Secretary Brannan pointed out: "These achievements are helping greatly to strengthen the foundations of agriculture, a fact of importance in these days when expanded production is needed for national defense.... They have shown ways to make wiser use of our abundance and to utilize what once was wasted."

George W. Irving, Jr., was the chairman of the Yearbook Committee for this volume. Other members were M. J. Copley, G. E. Hilbert, R. T. Milner, Walter M. Scott, Carl F. Speh, F. L. Teuton, P. A. Wells, Paul E. Howe, E. O. Whittier, H. L. Haller, Callie Mae Coons, A. H. Moseman, W. H. Larrimer, F. D. Fromme, and Louis B. Howard.

The 145 chapters dealt with the processing of all major American farm products, their industrial and food uses, byproducts from them, the utilization of wastes and secondary materials, the procedures involved in finding new uses, and the requirements of consumers and markets.

Insects, the 1952 Yearbook, contained 780 pages, plus an 8-page insert of black and white photographs, and a 144-page 1952 insert of 72 color plates with descriptions and control recommendations of important insects of the United States. The volume also contained a bibliography, appendix, and index.

Secretary Brannan wrote in the Foreword: "This practical book gives farmers and many other persons a great deal of information about the useful insects, as well as the harmful ones which are estimated to cost us four billion dollars a year."

"It is a timely book. In helping us combat our insect enemies it helps us produce more food, feed, fiber, and wood, all of which we need more than ever before." But he added that the book was also a disturbing one, since "Although the science of entomology has made great progress in the past two decades, the problems caused by insects seem to be bigger than ever. We have more insect pests, although we have better insecticides to use against them and better ways to fight them."

The editor's Preface said: "Into this Yearbook have gone the results of nearly 100 years of the study of insects. The Bureau of Entomology and Plant Quarantine, which was responsible in large measure for the book, traces its origins that far back. The century has seen great changes in farming methods, the intensiveness and extent of agriculture, transportation, and crops. All have affected profoundly our relationships with insects. We hope this Yearbook will be a contribution to the general understanding of those relationships and to the efficiency and well-being of American farming and living."

The 110 articles were in 21 sections of the book. The sections were: Introducing the Insects; How to Know an Insect; Insects as Helpers; Insects as Destroyers; The Nature of Insecticides; Applying Insecticides; Warnings as to Insecticides; Resistance to Insecticides; Fumigants; Quarantines; Other Controls; Economic Entomology; Insects, Man, and Homes; Insects on Cotton; Insects and Vegetables; Insects on Fruit; Insects on Field Crops; Pests on Ornamentals; Livestock and Insects, Forests, Trees, and Pests; and Insects and Wildlife.

Members of the Yearbook Committee that planned this volume were: F. C. Bishopp, G. J. Haeussler, H. L. Haller, W. L. Popham, B. A. Porter, E. R. Sasscer, J. S. Wade, Benjamin Schwartz, Karl S. Quisenberry, and E. R. McGovran.

Insects was chosen out of 670 books as one of the Fifty Books of the Year by the American Institute of Graphic Arts.

Plant Diseases, the Yearbook for 1953, contained 940 pages, plus a 16-page insert of color plates.

1953

Curtis May was chairman of the Committee that planned the book. Other members were: Philip Brierley; Edward E. Clayton; John C. Dunegan; Kermit W. Kreitlow; W. D. McClellan; Paul R. Miller; H. A. Rodenhiser; W. J. Zaumeyer; C. L. Lefebvre; and Willis H. Wheeler.

The book was divided into 13 sections: Costs and Causes; Bases of Control; Growing Healthier Plants; Grasses and Legumes; Cotton; Food and Feed Grains; Vegetable Crops; Sugar Crops; The Tobacco Plant; Some Ornamentals; Fruits and Nuts; After Harvest; and Some Others.

Secretary Benson wrote in the Foreword: "To me the most startling aspect of plant diseases is that they cost us an estimated three billion dollars a year.

"We need to give more attention to solving permanently the problems of plant diseases and not to be satisfied with palliatives that at best provide only temporary relief."

The editor wrote in the Preface: "As a book of science, the Yearbook is prepared with no thought of influencing farm policies inside or outside the Department of Agriculture. Its aim is to give complete, practical discussions of one topic in clear (but not elementary) language. It is prepared primarily for American farmers, but changes in the farm population and the increasing interest of nonfarm citizens in food, clothing, conservation, processing, and many other related topics mean that they also enter into our consideration when we plan and prepare a volume....

"In this book we present information on the causes and control of many diseases of our important crop plants. We emphasize practical details, but we also discuss fundamental biological facts that underlay the comparatively new science of phytopathology."

Marketing, the 506-page Yearbook for 1954, was divided into 18 sections: The Basis; Sale Off Farms; Central Markets; Food Retailers; 1954 Trade Abroad; Transportation; Storage; Processing; Grades, Standards; Facts - Fast; We Who Eat; The Industry; Cooperatives; Fair Dealing; Ownership; Prices, Pricing; Efficiency; and An Atlas.

The members of the Yearbook Committee that planned the volume were: Harry C. Trelogan, chairman; Arthur E. Browne; William C. Crow; Roy W. Lennartson; Sterling R. Newell; Herman M. Southworth; Frederick V. Waugh; O. V. Wells; E. C. Elting; W. T. Pentzer; Gertrude S. Weiss; and Joseph G. Knapp.

The editor wrote in the Preface: "The purpose of this book is to give information about the dynamic business that brings American farm products to their users. The information should help many persons: The farmer, to make more money; the housewife, to buy better; the wholesaler, retailer, and all the others who handle farm products, to give better service; the administrator and student of agriculture, to get a broader view of the structure of this large sector of our economy, within which so many agricultural problems come to focus.

"Our purpose is not to outline an official program, for that has never been a function of the Yearbooks of Agriculture.

"The chapters of this book are organized to give first a general view of the components of the marketing system and its importance, then a description of its major parts, and finally discussions of its many problems. An Atlas of Marketing pictures the handling of some of our main products."

Secretary Benson indicated in the Foreword the challenge before us: "The challenge to our American system is to maintain both freedom and order -- to assure the flexibility that stimulates progress and the stability that promotes steady employment and purchasing power."

"To that challenge we in the Department of Agriculture have increasingly turned our thoughts and efforts. Greater emphasis than ever before has been placed on marketing as a mainspring to our national and individual lives."

Marketing was chosen as one of the Fifty Books of 1954 by the American Institute of Graphic Arts.

Water, the 752-page Yearbook for 1955, was divided into 13 sections: Our Need for Water; Where We Get Our Water; Water and Our 1955 Soil; Caring for Our Watersheds; Water and Our Forests; Water for Irrigation; Water and Our Crops; Our Ranges and Pastures; Gardens, Turf, and Orchards; Drainage of Fields; Water and Our Wildlife; Pure Water for Farms and Cities; and A Look to the Future.

The members of the Yearbook Committee for 1955 were: Carleton P. Barnes, Elco L. Greenshields, Omer J. Kelley, Bernard Frank, Warren T. Murphy, Dana Parkinson, Carl B. Brown, Charles E. Kellogg, George R. Phillips, and Gladwin E. Young.

The editor wrote in the Preface: "One purpose of this Yearbook is to supply as much information as we can about water in a practical, useful way for farmers and others who use water...."

"Another aim is to emphasize that more information, more wisdom are needed. That need is mentioned again and again in the book...."

Secretary Benson wrote in the Foreword: "We have to know where water comes from and what happens to it. We have to know how much can be used and when, and how our land practices influence its behavior.

"We have to stop wasting water. We have to use it more efficiently in industry, in towns and cities, in general farming, and in irrigation, which is destined to be adopted in all parts of the Nation."

Animal Diseases, the Yearbook for 1956, contained 592 pages. There were 11 sections: To Guard the Health of Man and Animals - 1956 Our Goal; Basic Principles in the Prevention and Treatment of Diseases; Some Methods in the Prevention and Treatment of Diseases; Diseases and Parasites Affecting Several Species of Animals; Diseases and Parasites Affecting Cattle; Sheep and Goats; Affecting Poultry; Dogs and Cats; Horses and Mules; and Fur-bearing Animals.

The 1956 Yearbook Committee included: O. E. Reed, Hugh C. McPhee, B. T. Simms, Benjamin Schwartz, Ralph E. Hodgson, Lane A. Moore, T. C. Byerly, N. R. Ellis, E. G. McKibben, C. P. Heisig, John R. Matchett, C. D. Van Houweling, Samuel B. Detwiler, Jr., J. Kendall McClarren, and E. F. Knipling.

The editor wrote in the Preface: "This Yearbook gives information about the cause, nature, and prevention of the common diseases of animals on American farms.

"We have tried to make it useful, practical, and complete within the limits of time, expense, and scope that we had to observe. It is not a "veterinary handbook."

"A precursor of this volume was the 1942 Yearbook of Agriculture, Keeping Livestock Healthy.... The present book was not thought of as a new or revised edition of the earlier volume; it is an entirely different book because knowledge of the subject has developed so greatly in the intervening years."

Secretary Benson saluted the workers in the biological sciences in the Foreword: "They are in the forefront in our relentless fight against animal diseases, some of which are linked closely to human health.

"They have done much for us as individuals and as a Nation, as the chapters in this Yearbook prove....

"They have enlarged our knowledge of zoology, pathology, parasitology, immunology, and other sciences that affect human life no less than the other forms of life.

"I salute them also for the affirmative courage with which they face up to the challenges of the future."

Soil, the 784-page Yearbook for 1957, contained a glossary and index, plus an 8-page insert of photographs.

1957

The volume was divided into eight sections: Principles; Fertility; Practices; Soil Care; Moisture; Systems; Regions; and Special Uses.

The members of the Committee that planned the volume were: Charles E. Kellogg, W. H. Allaway, Carleton P. Barnes, N. C. Brady, V. L. Harper, Carl P. Heisig, W. H. Pierre, Harold E. Pinches, K. S. Quisenberry, F. G. Ritchie, Wynne Thorne, C. H. Wadleigh, and Eric Winters.

Secretary Benson commented on the need for more research in the management of soil and said: "Not only must we learn more about the management of our soil and water; we must encourage the wider dissemination and application of the results of this research.

"That is why I am so keenly interested in this Yearbook of Agriculture and commend it to you and your neighbors. The facts in it are the product of years of patient, useful, practical research, and publishing it in this form is the best way I know of making it available to all Americans, wherever they live."

The editor wrote in the Preface; "This book is, as a plant scientist might say, a new and adapted variety of Soils and Men, the 1938 Yearbook of Agriculture....

"The 1938 Yearbook of Agriculture devoted considerable space to the classification of soils, technical aspect of soil science, and the use of land (which we take to be different from the use of soil).

"Because our knowledge of soil has expanded greatly since 1938 and emphasis and needs have changed, this Yearbook of Agriculture is limited to the management of soil, itself a big and burgeoning subject."

		Number printed for:	Cost	No. of Sales			
				U.S.D.A.	Congress	Copies Sold by * at Sup. Doc.	Price at GPO
1936	<u>Better Plants and Animals</u> (Vol. I)	231,650				10,023	Out of Print
	1189 pages, illus.						
	23 chapters						
1937	<u>Better Plants and Animals</u> (Vol. II)	231,650				8,978	Out of Print
	1497 pages, illus						
	44 chapters						
1938	<u>Soils and Men</u>	231,650				11,538	Out of Print
	1232 pages, illus.						
	60 chapters						
1939	<u>Food and Life</u>	231,650				12,916	Out of Print
	1165 pages, illus.						
	57 chapters						
1940	<u>Farmers in a Changing World</u>	15,000	231,250	\$134,928		15,833	\$1.50
	1215 pages, illus.						
	55 chapters						
1941	<u>Climate and Man</u>	15,000	232,153			20,164	Out of Print
	1248 pages, illus.						
	40 chapters						
1942	<u>Keeping Livestock Healthy</u>	15,000	231,591	\$185,694		71,582	\$2.25
	1276 pages, illus.		231,250	Reprint			
	98 chapters			\$178,000			
1943-47	<u>Science in Farming</u>	10,000	231,250	\$212,057		35,878	\$2.25
	944 pages, illus. (inc.						
	136 pp. b.&w. photo.)						
	135 chapters						
1948	<u>Grass</u>	10,000	231,250	\$179,667		41,862	\$2.00
	892 pages, illus. (inc. 16		179,667	Reprint			
	pp. color, 16 pp. b.&w.)			\$153,100			
	128 chapters						

*Sales as of September 3, 1957

		Number printed for:	Cost	Sale	
				Copies Sold by*	at Sup.Doc.
1949	<u>Trees</u>	15,903	\$230,850	\$226,902	63,680 \$2.00
	944 pages, illus. (inc. 16 pp. color) 128 chapters				
1950-51	<u>Crops in Peace and War</u>	12,000	\$230,850	\$278,247	12,206 \$2.50
	958 pages, illus. 148 chapters				
1952	<u>Insects</u>	12,000	\$230,850	\$293,708.72	50,128 \$2.50
	952 pages, illus. (inc. 72 color drawings, 8 b.&w. photo.) 110 chapters				
1953	<u>Plant Diseases</u>	12,000	\$230,850	\$258,756.41	25,639 \$2.50
	992 pages, illus. (inc. 32 pp. color photo.) 147 chapters				
1954	<u>Marketing</u>	10,000	\$230,850	\$162,390.20	21,852 \$1.75
	520 pages, illus. (inc. 50 2-color charts) 88 chapters				
1955	<u>Water</u>	10,000	\$230,850	\$223,112.19	24,961 \$2.00
	766 pages, illus. 96 chapters				
1956	<u>Animal Diseases</u>	10,000	\$230,850	\$213,000 (appropriated)	21,323 \$2.00
	606 pages, illus. 134 chapters				
1957	<u>Soil</u>	10,000	\$230,850		\$2.25
	806 pages, illus. (inc. 8 pp. b.& w. photo.) 88 chapters				

* Sales as of September 3, 1957

Some Comments About Recent Yearbooks

1956 - Animal Diseases

"Thoroughly up-to-date and comprehensive."

— Colorado Rancher and Farmer

"Want a '2 book, that's worth \$200 to a real stockman, for free? Write your Senator or Representative now ... you may want to ask him, or her, excuse me, for the back Yearbooks."

— Sam Guard's Roundup, Breeder's Gazette

"... an excellent volume to have about any farmhouse - or city flat, for that matter, if there are pets about."

— The Sunday Star, Washington

"It is a wrap-up of all the major and less-major sicknesses that may confront the animal husbandman."

— The New York Times

1955 - Water

"... is telling the fascinating story of water in readable language ... surprisingly interesting, it will make a hit with farm people from teenage and on."

— National Farmers Union's Washington Newsletter

"... interesting and valuable reading for any progressive farmer, and certainly is a 'must' for every teacher or other person concerned with conservation or other phases of water use."

— Farm Reporter, State College of Washington, Station KWSC

"... an interesting compendium of a tremendous amount of useful information..."

— Geological Newsletter

"... an excellent tool and furnishes many useful guides to meet this objective. Certainly every forester should acquire and use this valuable tool and reference."

— Forest Service, a Quarterly Journal of Research and Technical Progress

"The U.S.D.A. should be commended for adding another to its already long list of outstanding Yearbooks. No other organization or type of publication could fill this need. The 1955 Yearbook should erase any doubts as to the wisdom of the Yearbook. This publication justifies the efforts in the last few years to continue the series. We, as agricultural economists ... have been well rewarded for our strong support of the U.S.D.A. Yearbook."

— Journal of Farm Economics

"... tells a connected story, brings the commonplace into fresh perspective, and weaves the subject of water through a description of the life processes about us...."

— American Forests

1954 - Marketing

"To the commercial cattleman, to the cattle feeder and to serious students of agricultural economics the 1954 Yearbook ... should be of interest. Encyclopaedic in its coverage...."

— Western Live Stock

"... a valuable source book...."

— Journal of the American Dietetic Association

"Put your finger on almost any problem or process in the marketing of farm products and you will find it discussed in the 1954 Yearbook...."

— Democrat and Chronicle
Rochester, N. Y.

"... a valuable reference volume for every home economics library."

— Journal of Home Economics

1953 - Plant Diseases

"This authentic book will be valued by all agricultural workers."

— National Fertilizer

"... an outstanding work, invaluable to every student of plant pathology...."

— Review of Applied Mycology

"The Yearbook is the highest in governmental service. It is older than the Department of Agriculture, itself. It is scholarly but practical; visionary but useful; scientific but readable."

— Dallas News

"... the last word on plant diseases, from house and garden flowers to grains, fruits, nuts, shrubs and trees...."

— The Minneapolis Star and Tribune

1952 - Insects

"A monumental, fascinating and indispensable work, and the biggest bargain on the agricultural book list for the year current."

— The Land

"Practically anything you might like to know about insects may easily be found here.... This Yearbook is a great credit to the United States Department of Agriculture."

— New York Herald Tribune

"... of tremendous interest on the farms and in the cities and towns throughout the land.... A work of art."

— Washington Sunday Star

"A veritable Who's Who of insects...."

— Science News Letter

"One of the most valuable editions of the publication dealing with practical agriculture."

— Nebraska Farmer

1950-1951 - Crops in Peace and War

"... a treasury of facts for anyone interested in agricultural research."

— Practical Home Economics

"By far the most complete and best book ever done about chemurgy, it tells in simple language what happens to our crops when industry takes them over...."

— Farm Journal

"... a truly remarkable book... it gives me in a single volume the material that I would have to go through a whole library to find."

— Journal of Soil and Water Conservation

1949 - Trees

"... the typography is of an attractiveness not often associated with government publications, and the cover is truly handsome. In truth, the book's physical features make it a most desirable two-dollar value in this year's crop of forestry literature."

— Journal of Forestry

"This is an opportune book and one of the handsomest big books I have held in my hand this year."

— Atlantic Monthly

"The Yearbook of Agriculture is far and away the best of government publications. This year the subject is Trees, and there are nearly a thousand pages of authoritative text and fascinating pictures. Every home with a yard should have the volume."

— Household

"Drawings and handsome colored photographs make this one of the best looking volumes the USDA has published. Even if you pay for it, it remains the book bargain of the year."

— Farm Quarterly

1948 - Grass

"This is an exceptionally important and useful reference volume, which should be readily available to all those concerned with the development of a better agriculture in this country."

— Soil Science

"Grass, the present volume, is one of the most effective in the entire series... this book is a great mine of information, and sugar planters may well own a copy, considering the price. In these days a book of 892 pages ... is a rarity at such a price."

— Sugar

1943-1947 - Science in Farming

"Those interested in agriculture should own this book."

— Fertilizer Review

"Approximately 150 authors have contributed to present the up-to-the-minute information on the application of science to modern farming. Good pictures of typical examples of many of the conditions discussed help to tell a complete story, and to tell it well."

— Journal of the American Veterinary Medical Association